

# Uncompahgre Field Office

## Draft Resource Management Plan and Environmental Impact Statement

### Volume III: Appendices

US Department of the Interior  
Bureau of Land Management  
May 2016

BLM



### **BLM MISSION**

It is the mission of the Bureau of Land Management to sustain the health, diversity, and productivity of the public lands for the use and enjoyment of present and future generations.

**BLM/CO/PL-16/006**



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## ACRONYMS AND ABBREVIATIONS

Full Phrase

ACEC	area of critical environmental concern
ATV	all-terrain vehicle
AUM	animal unit month
BLM	United States Department of the Interior, Bureau of Land Management
BMP	best management practice
BOR	United States Department of the Interior, Bureau of Reclamation
CARMMS	Colorado Air Resources Management Modeling Study
CFR	Code of Federal Regulations
CNHP	Colorado Natural Heritage Program
CPW	Colorado Parks and Wildlife
CSU	controlled surface use
decision area	public lands and federal mineral estate managed by the United States Department of the Interior, Bureau of Land Management
DOE	United States Department of Energy
DOI	United States Department of the Interior
EIS	environmental impact statement
EPA	United States Environmental Protection Agency
ERMA	extensive recreation management area
ESA	Endangered Species Act of 1973
federal mineral estate	subsurface mineral estate administered by the United States Department of the Interior, Bureau of Land Management
FLPMA	Federal Land Policy and Management Act of 1976
FMP	fire management plan
Forest Service	United States Department of Agriculture, Forest Service
FWFMP	Federal Wildland Fire Management Policy
GIS	Geographic Information Systems
IMPLAN	impact analysis for planning (model)
IMPROVE	Interagency Monitoring of Protected Visual Environments
ISA	instant study area
NCA	National Conservation Area
NEPA	National Environmental Policy Act of 1969
NGD	no ground disturbance
NHPA	National Historic Preservation Act of 1966
NL	no leasing
North Fork area	North Fork Alternative Plan area (63,400 acres of BLM-administered surface estate and 137,600 acres of federal mineral estate) (Figure 2-1)
NPS	United States Department of the Interior, National Park Service
NRHP	National Register of Historic Places
NSO	no surface occupancy
NWSRS	National Wild and Scenic Rivers System

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**ACRONYMS AND ABBREVIATIONS** *(continued)*

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Full Phrase

OHV	off-highway vehicle
ORV	outstandingly remarkable value
PFC	proper functioning condition
PFYC	Potential Fossil Yield Classification
PILT	payment in lieu of taxes
planning area	Uncompahgre Field Office boundary, including all lands, regardless of land ownership, except the Gunnison Gorge NCA Planning Area and the Dominguez-Escalante NCA
PM <sub>2.5</sub>	particulate matter smaller than 2.5 microns in effective diameter
PM <sub>10</sub>	particulate matter smaller than 10 microns in effective diameter
RMA	recreation management area
RMP	resource management plan
ROD	record of decision
ROW	right-of-way
SRMA	special recreation management area
SRP	special recreation permit
SSR	site-specific relocation
TL	timing limitation
UFO	Uncompahgre Field Office
US	United States
USC	United States Code
USDA	United States Department of Agriculture
USFWS	United States Department of the Interior, Fish and Wildlife Service
VRI	visual resource inventory
VRM	visual resource management
WSA	wilderness study area
WSR	wild and scenic river
WUI	wildland urban interface

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# Appendix A

## Figures





# APPENDIX A

## FIGURES

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Figures are available electronically on the CD-ROM enclosed with this RMP. They are also available on the RMP Web site ([http://www.blm.gov/co/st/en/fo/ufo/uncompahgre\\_rmp.html](http://www.blm.gov/co/st/en/fo/ufo/uncompahgre_rmp.html)).

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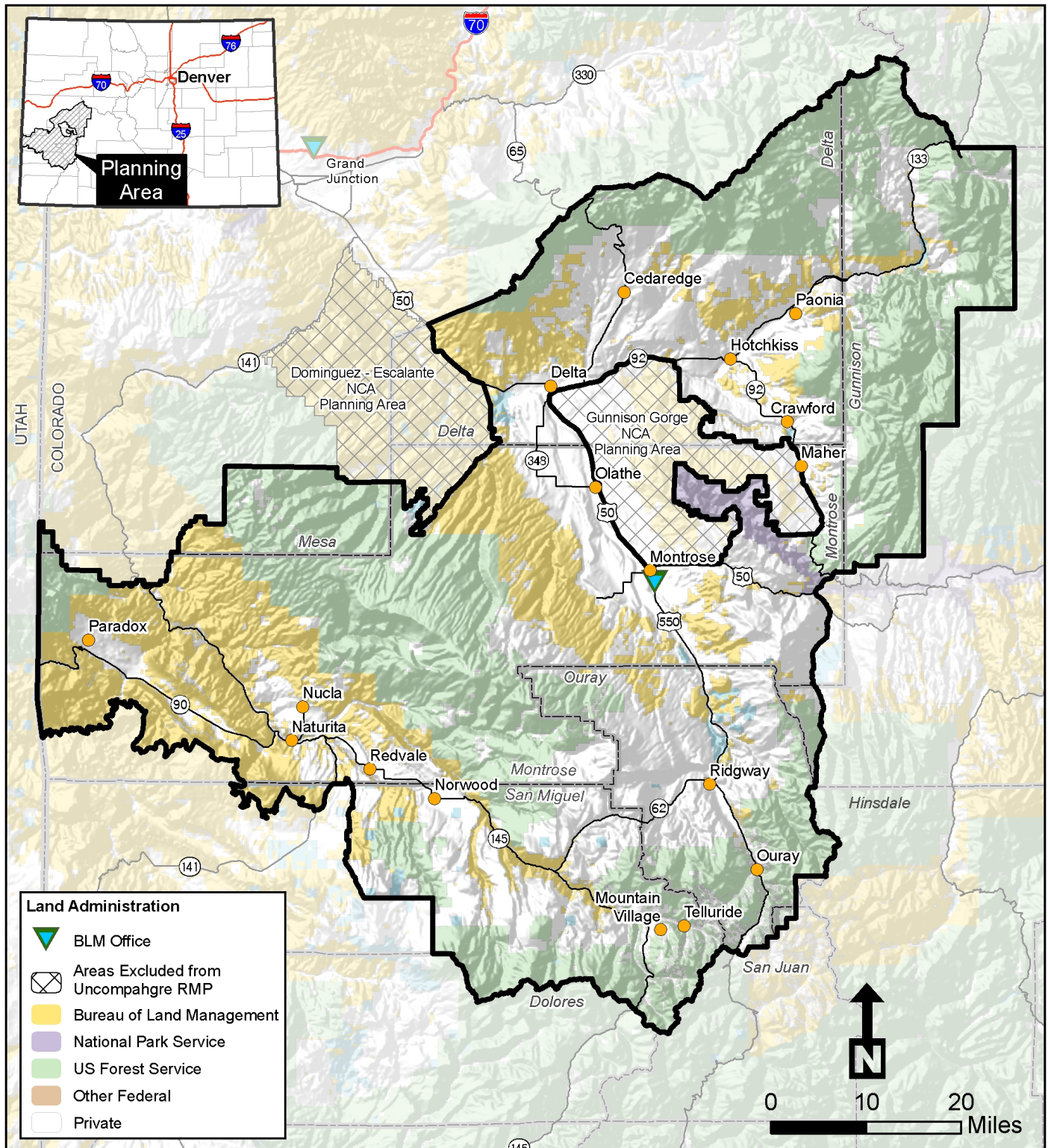


Figure I-1: Uncompahgre RMP Planning Area



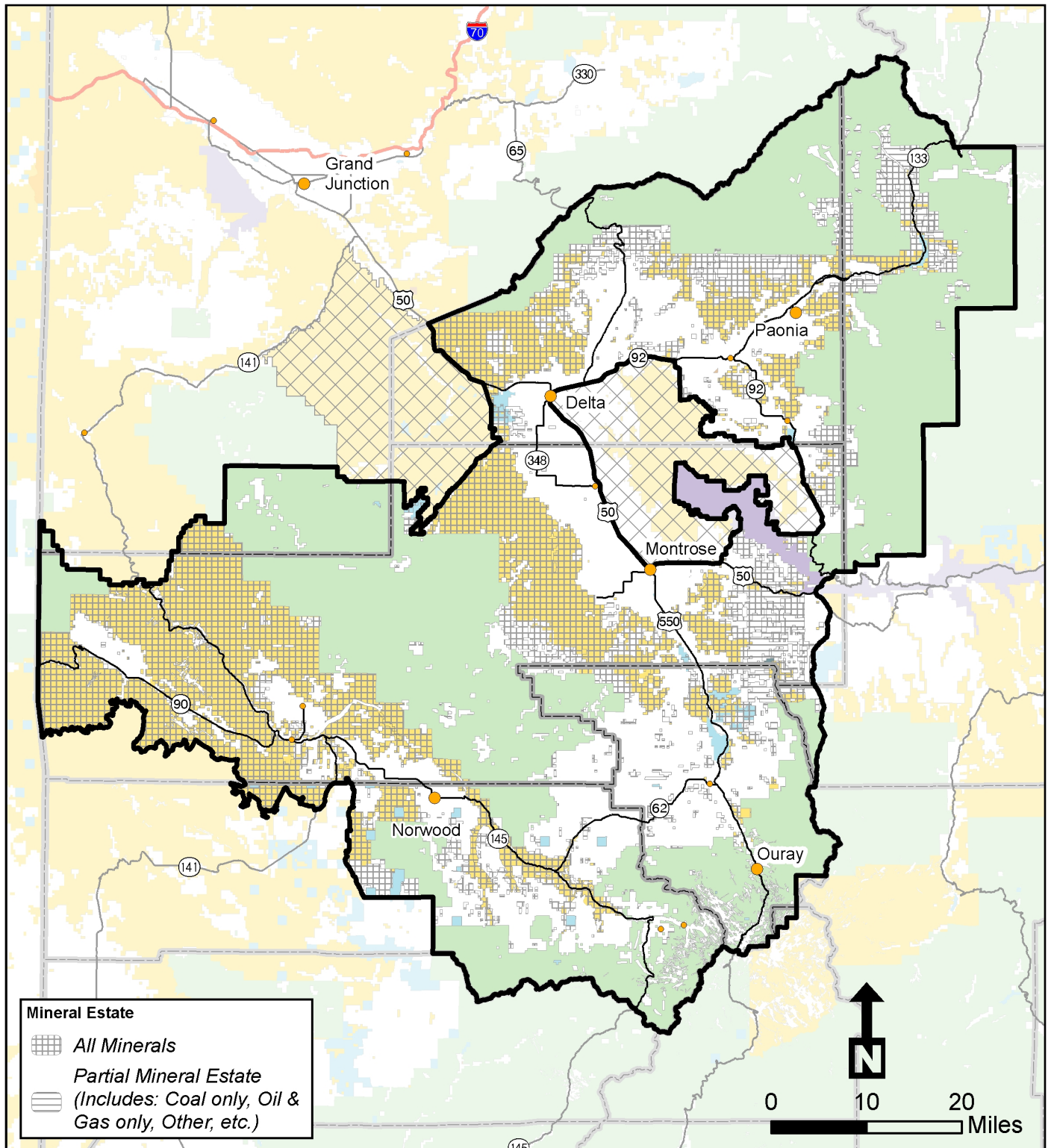


Figure I-2: Federal Mineral Estate

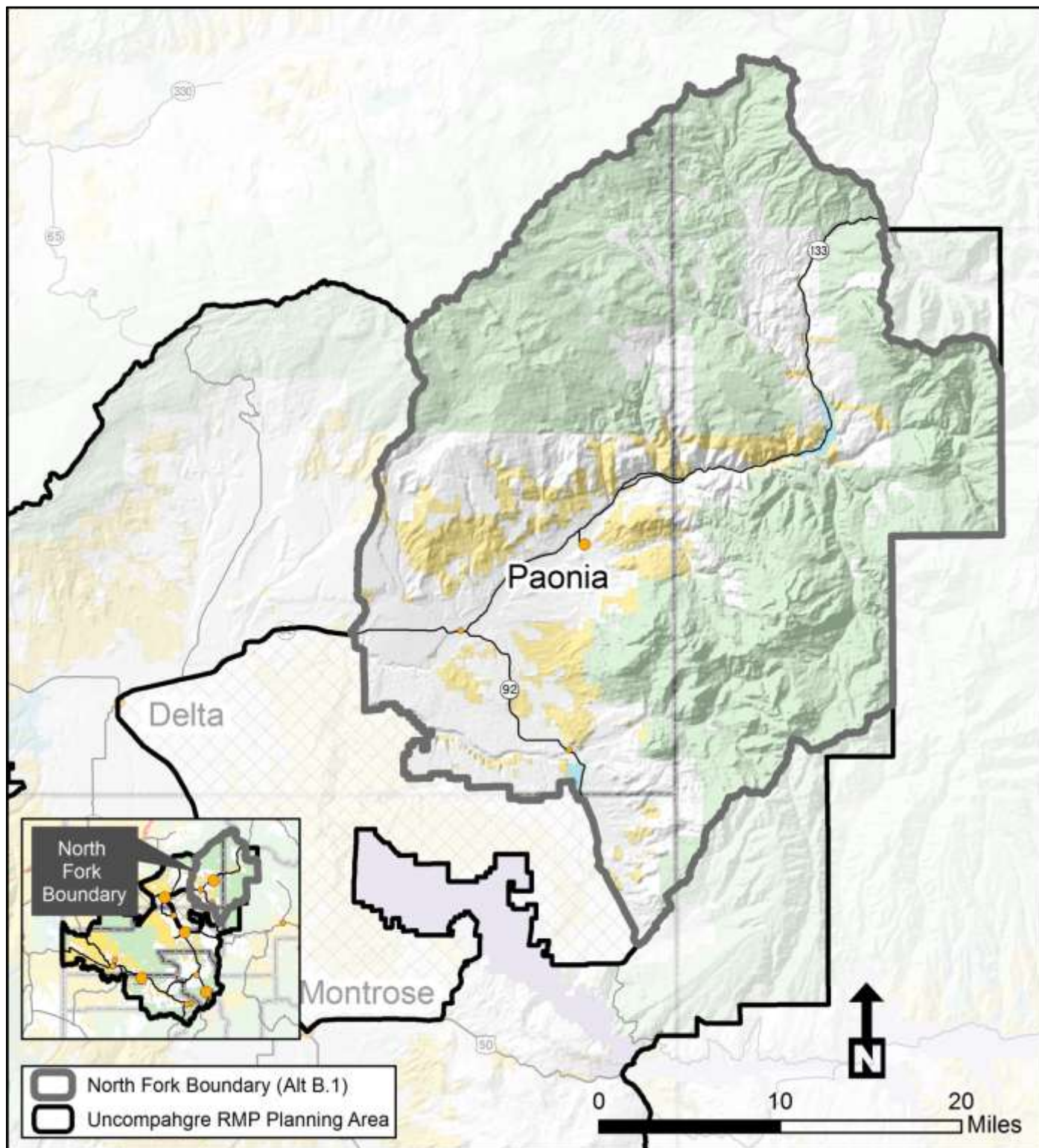


Figure 2-1: North Fork Alternative (Alternative B.1) Area



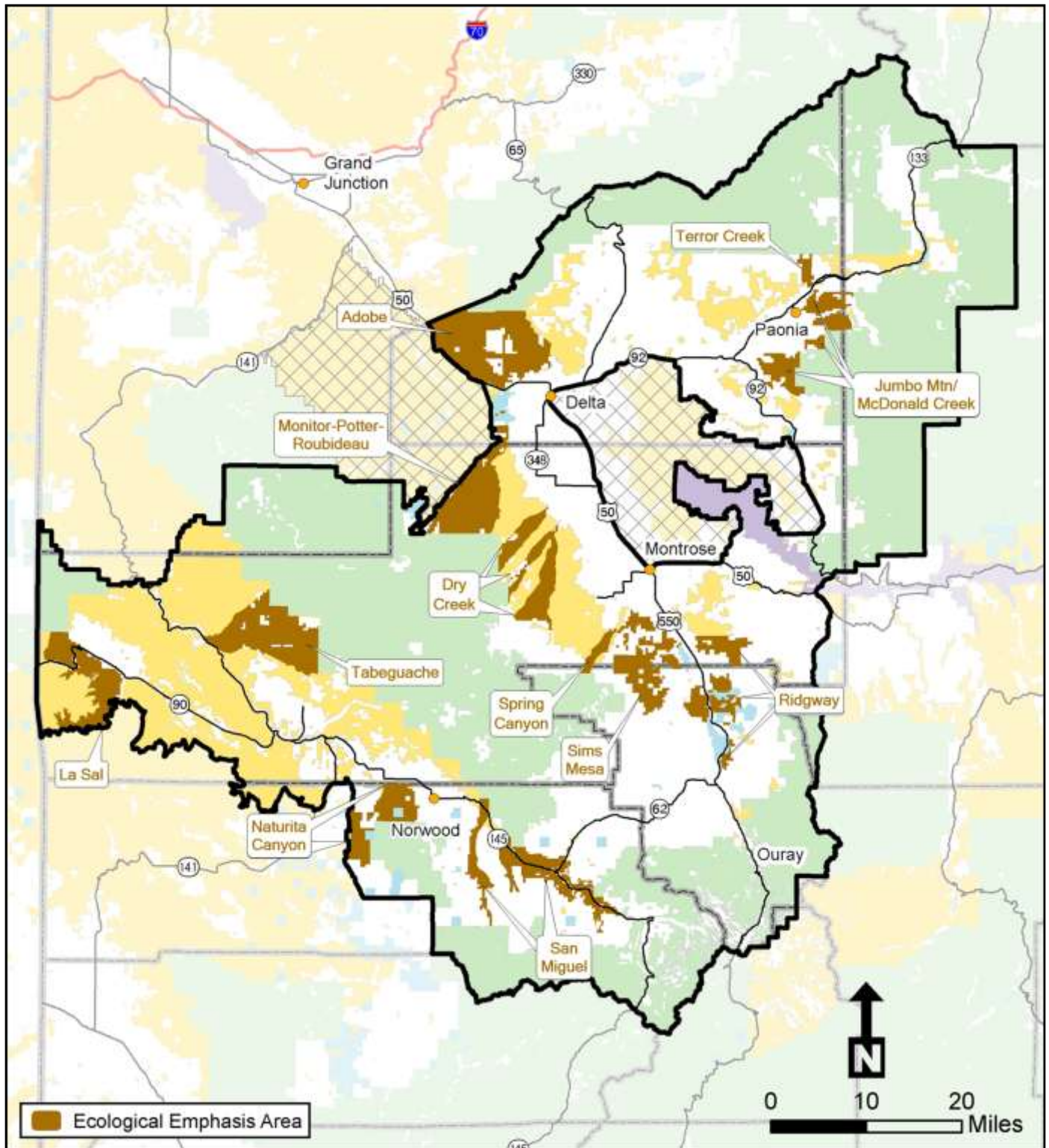


Figure 2-2: Alternative B: Ecological Emphasis Areas

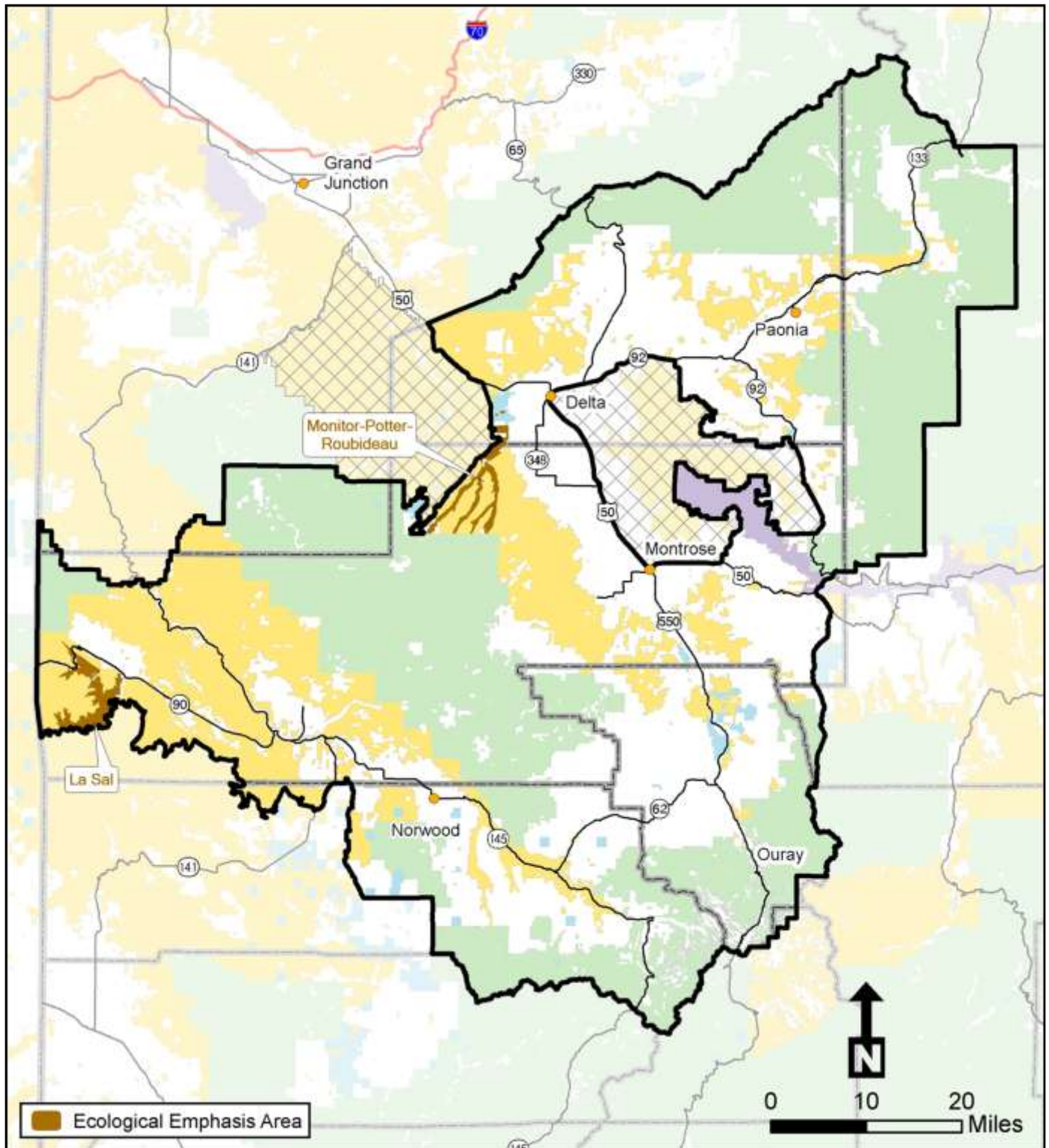


Figure 2-3: Alternative C: Ecological Emphasis Areas



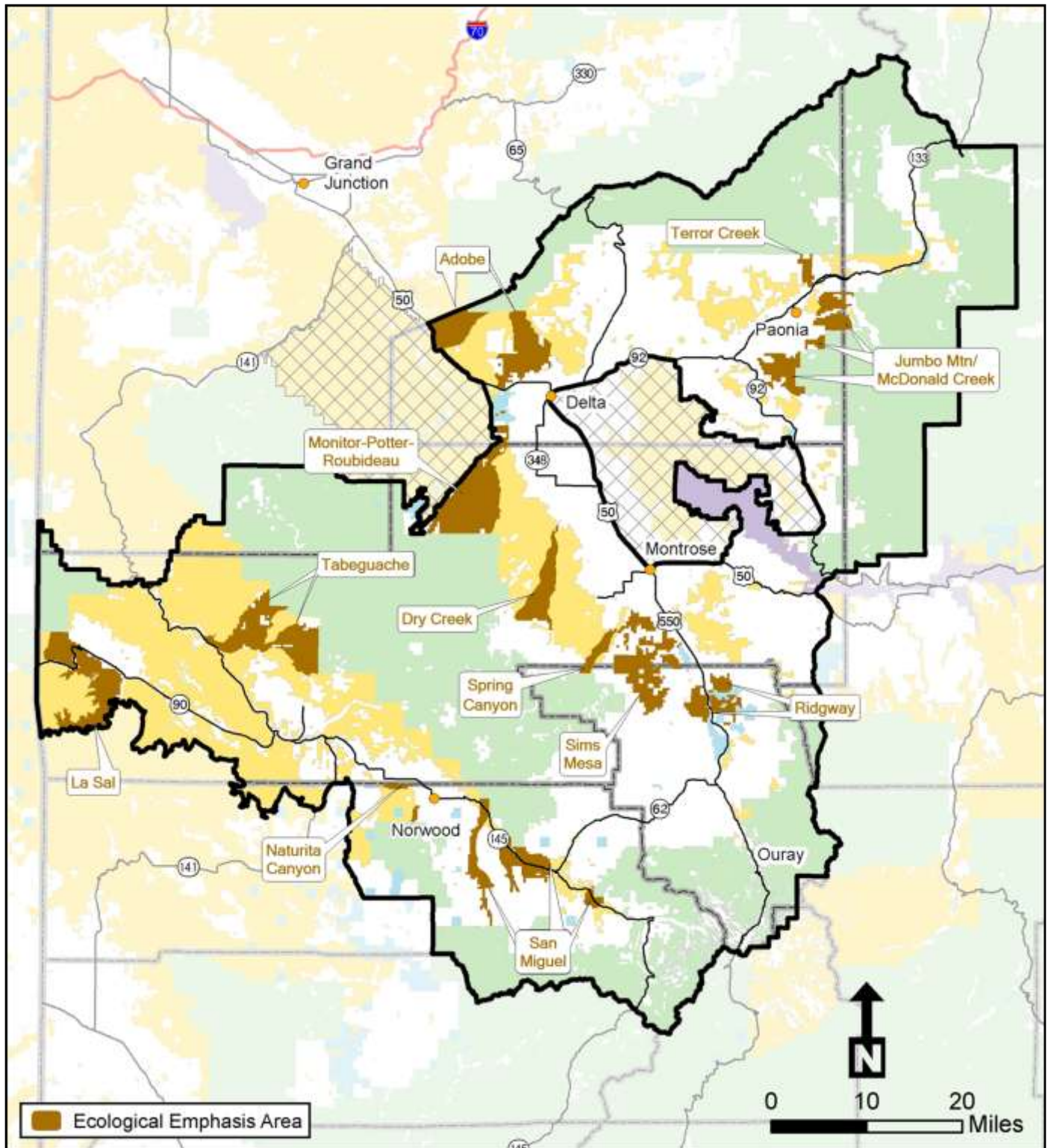


Figure 2-4: Alternative D: Ecological Emphasis Areas

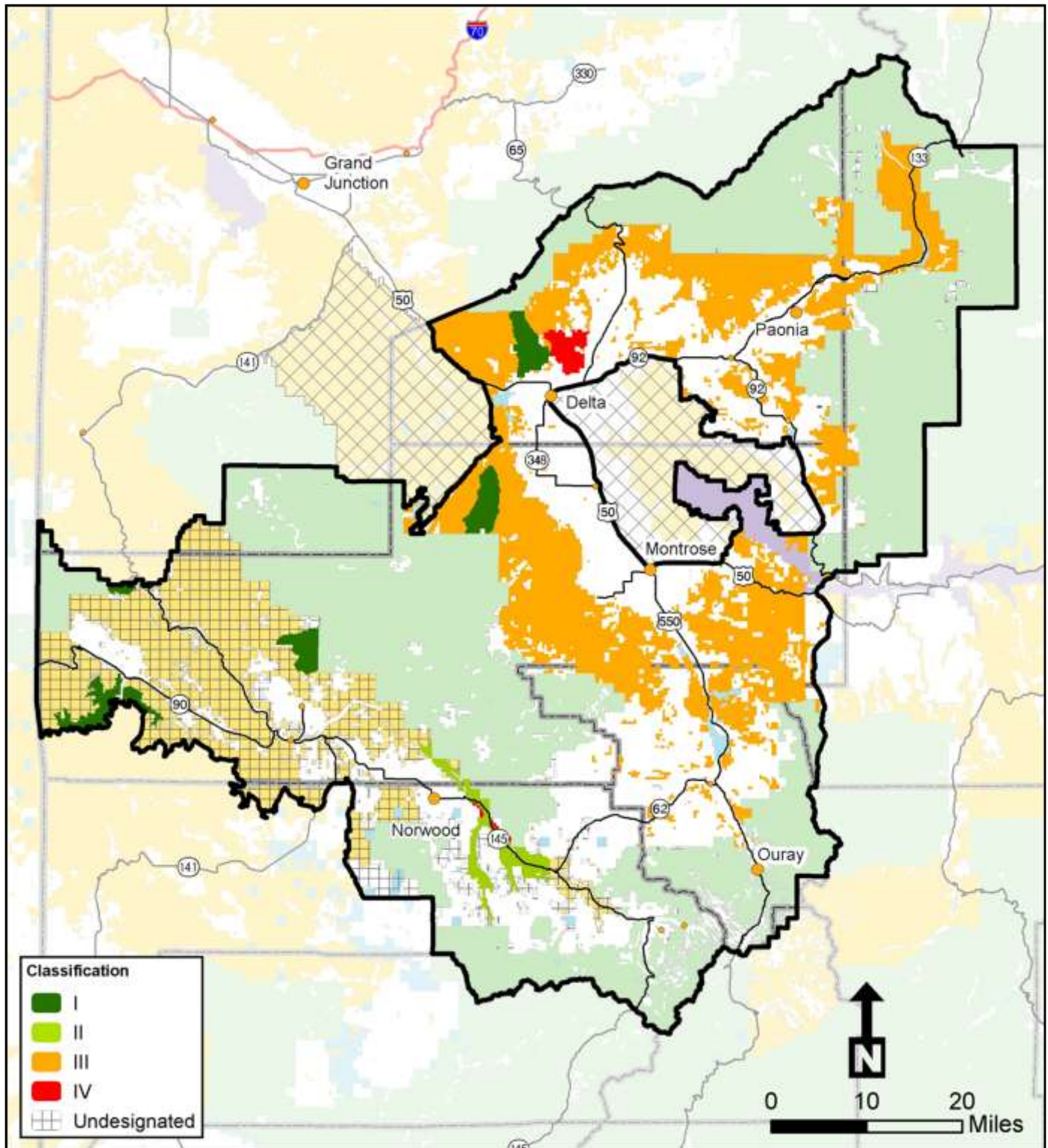


Figure 2-5: Alternative A: Visual Resource Management



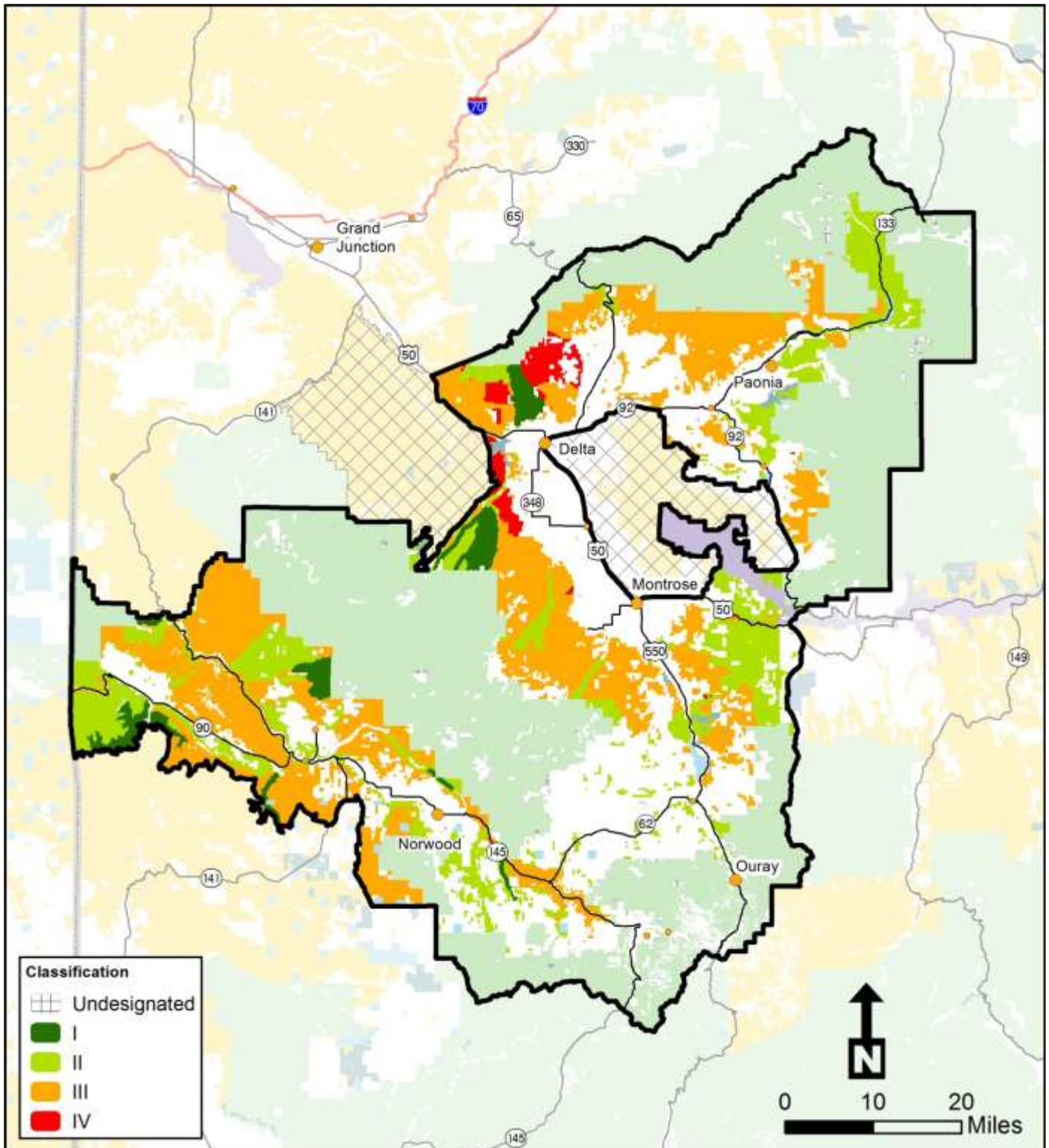


Figure 2-6: Alternative B: Visual Resource Management

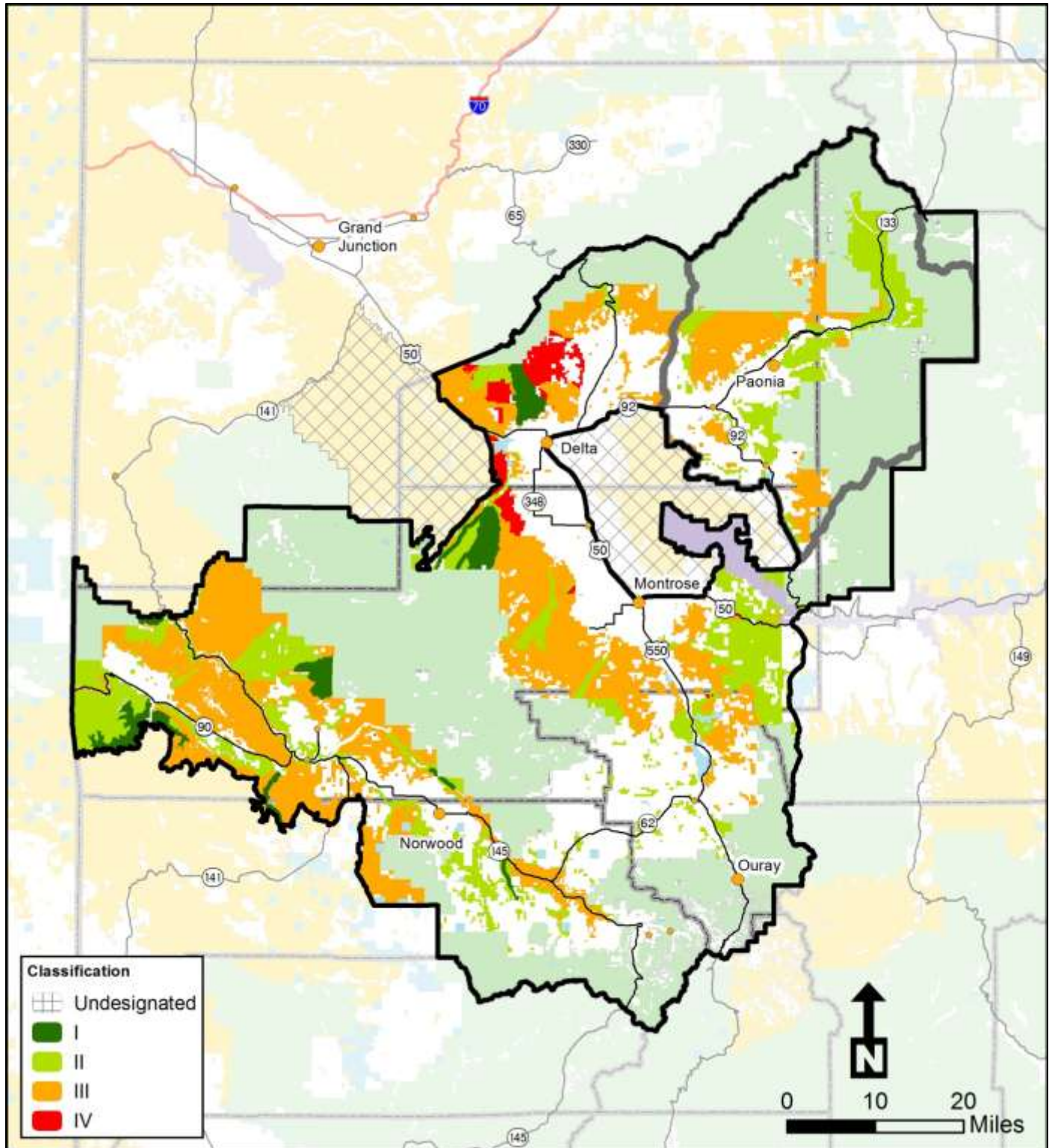


Figure 2-7: Alternative B.I: Visual Resource Management



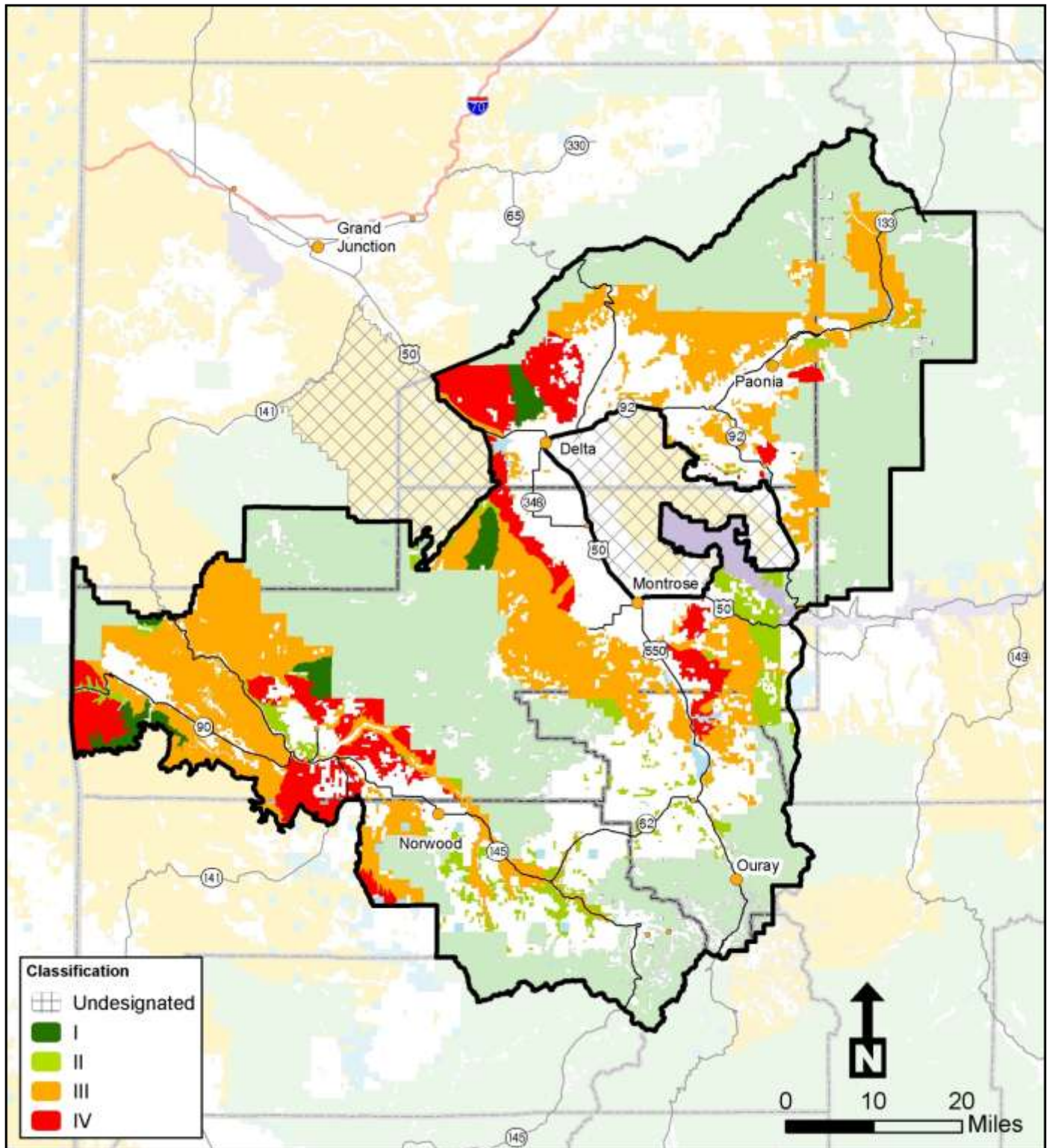


Figure 2-8: Alternative C: Visual Resource Management

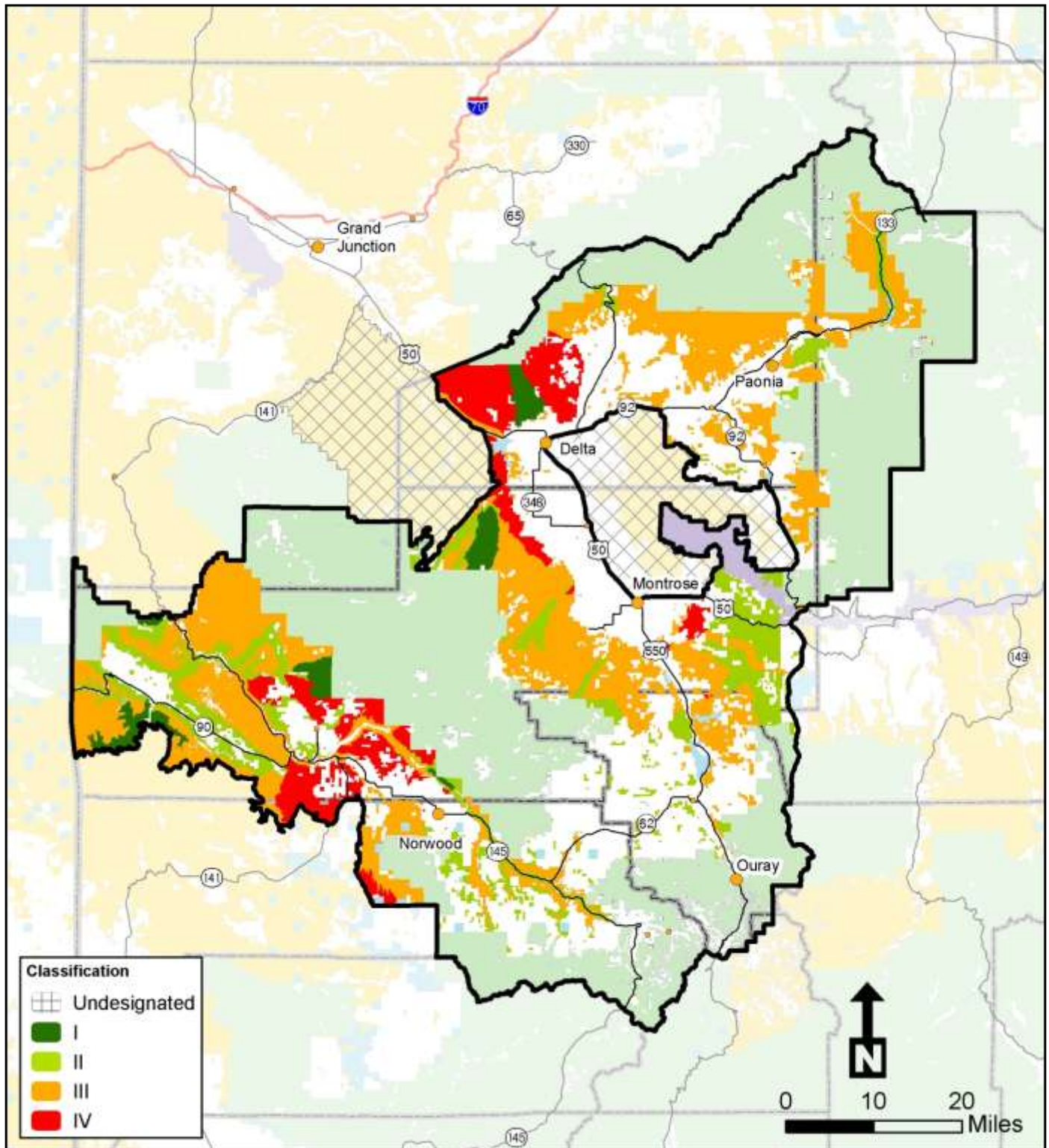


Figure 2-9: Alternative D: Visual Resource Management



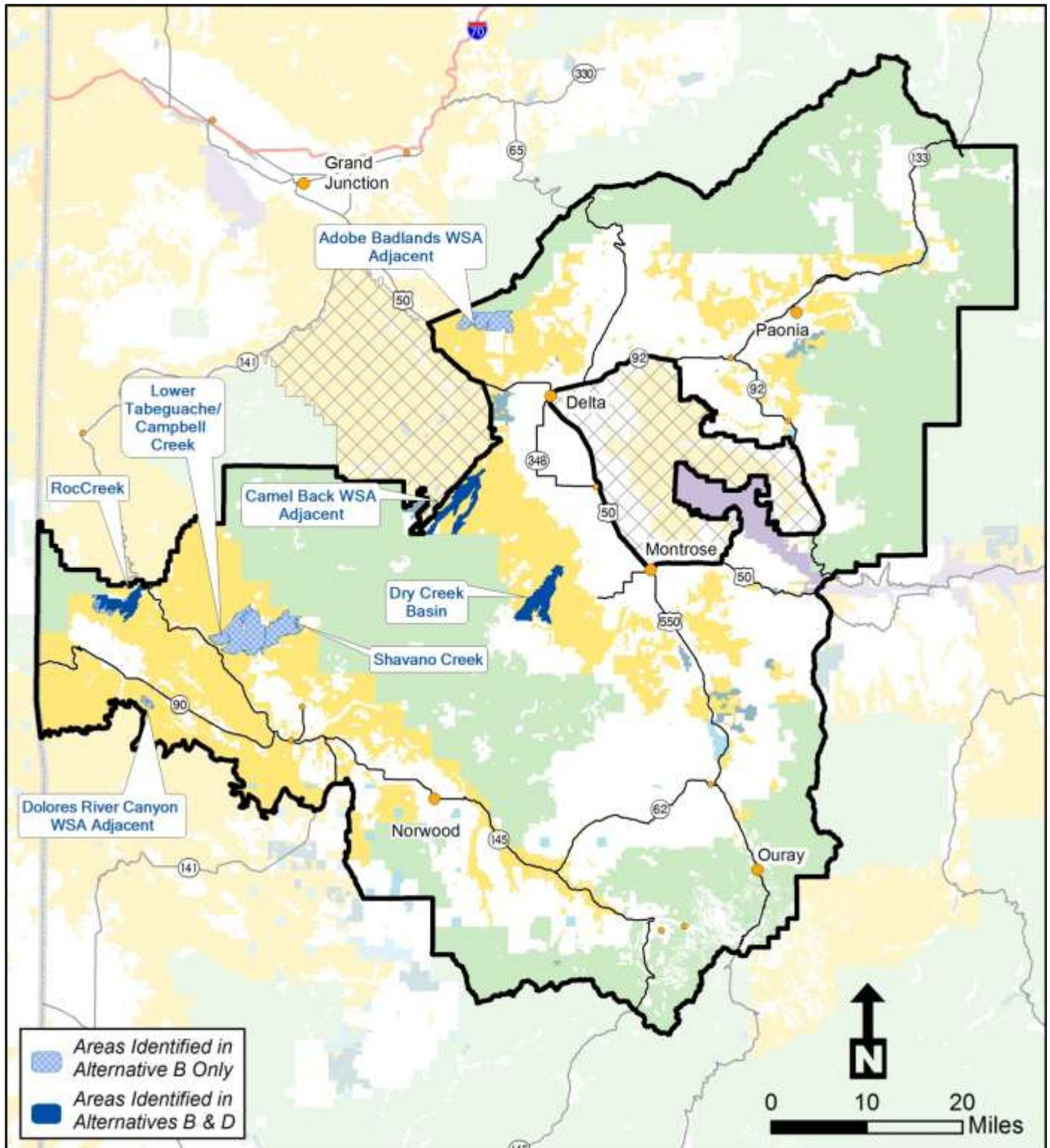


Figure 2-10: Alternatives B and D: Lands Managed to Protect Wilderness Characteristics

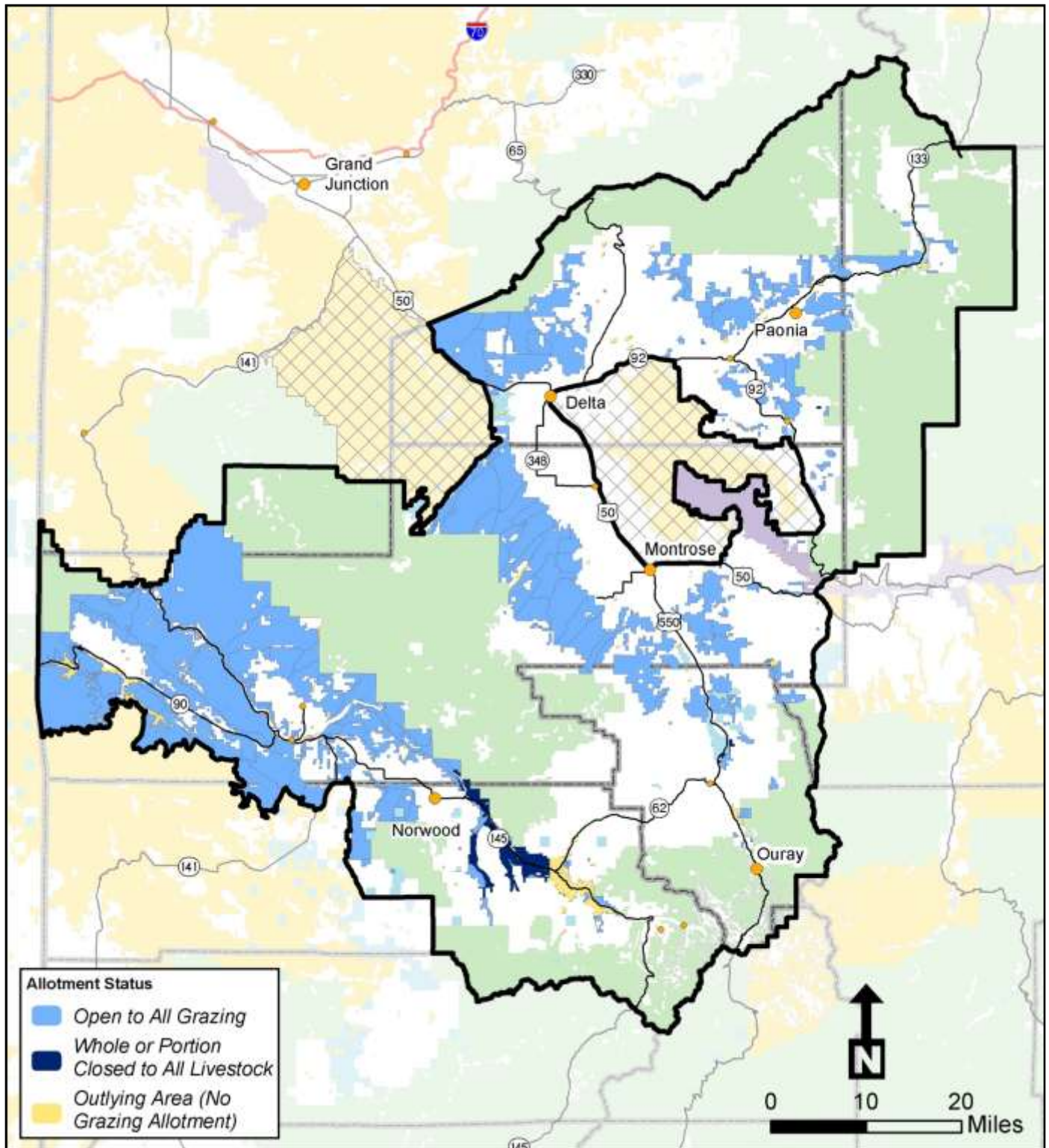


Figure 2-11: Alternative A: Grazing Allotments



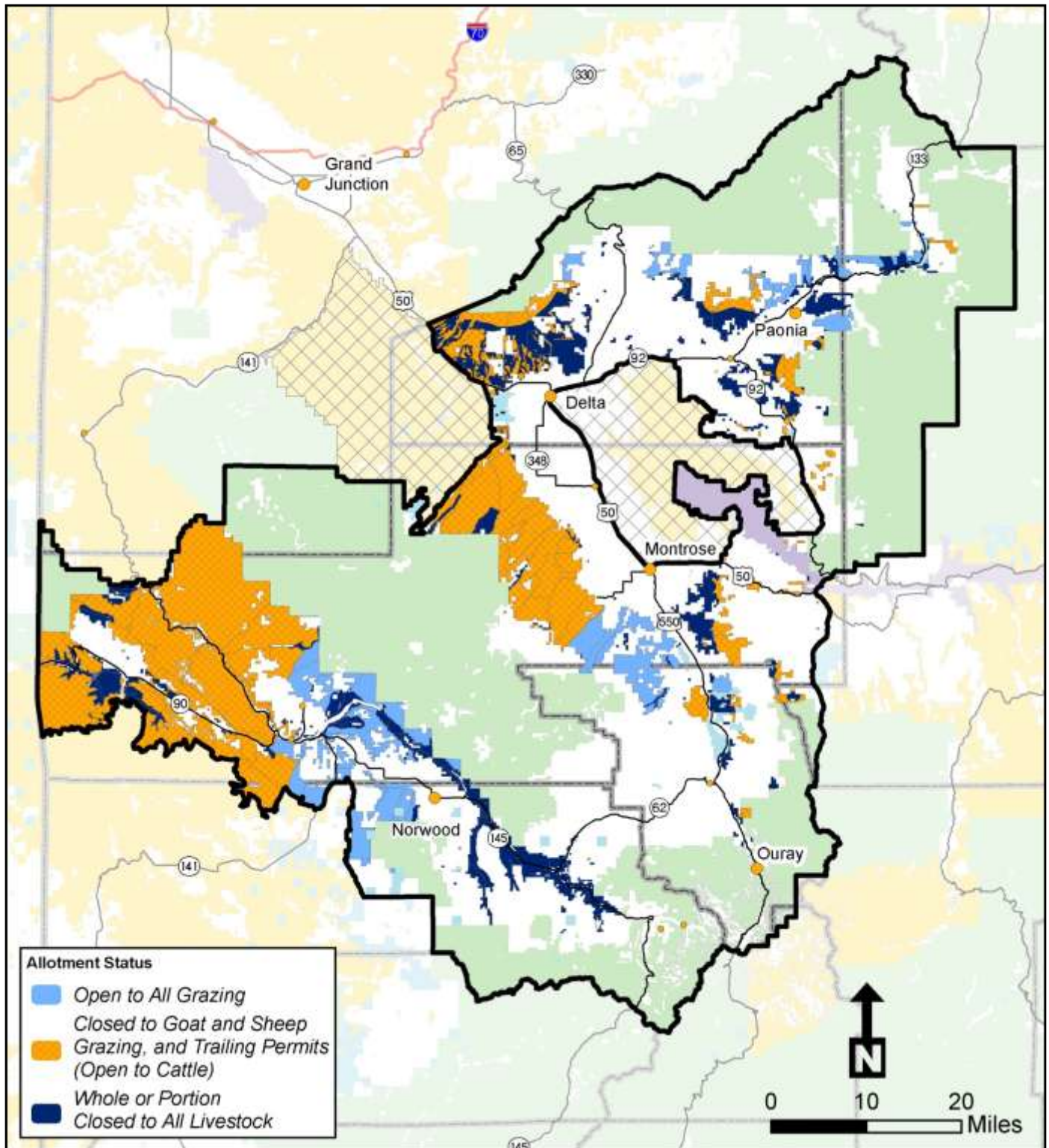


Figure 2-12: Alternative B: Grazing Allotments

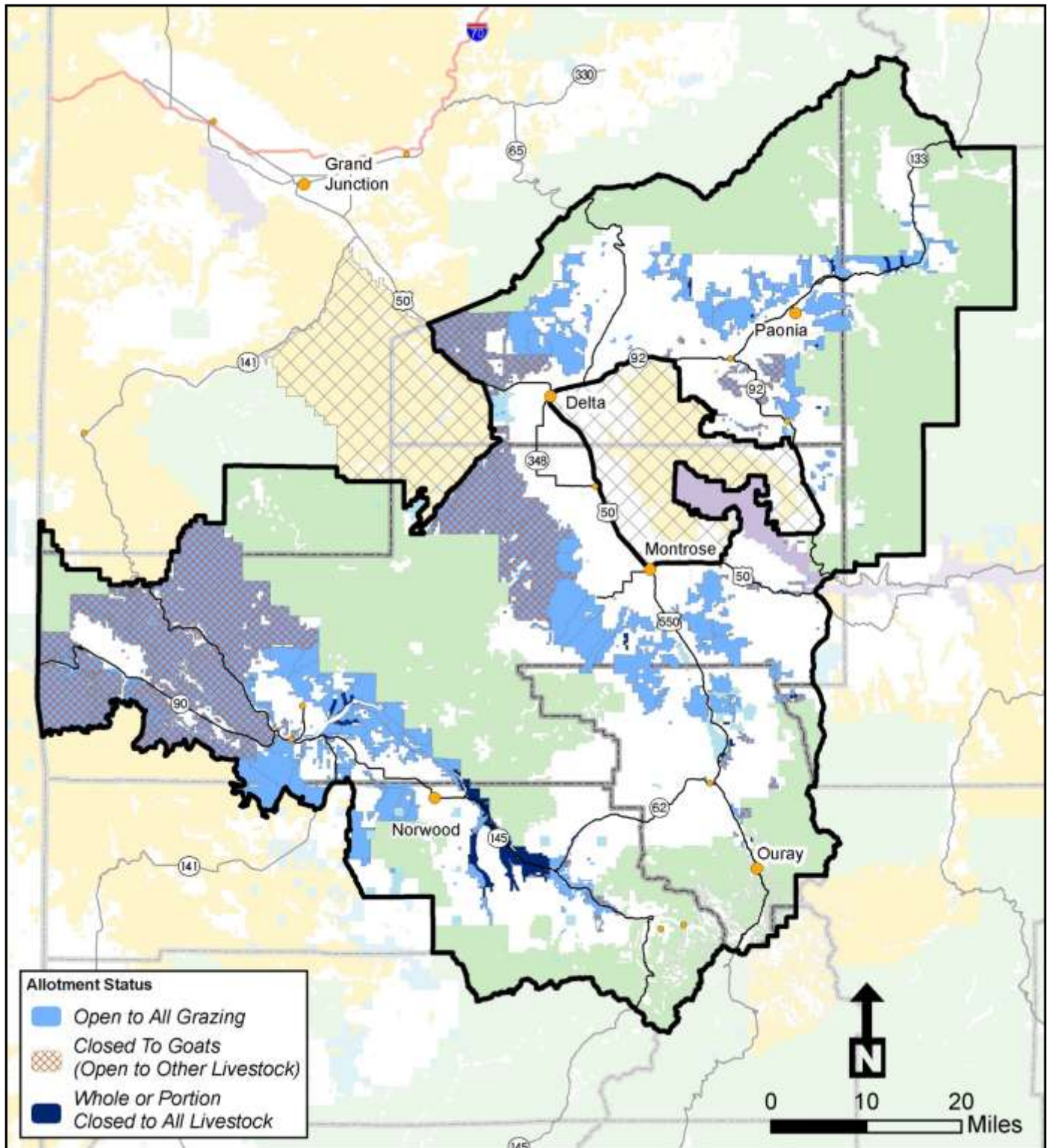


Figure 2-13: Alternative C: Grazing Allotments



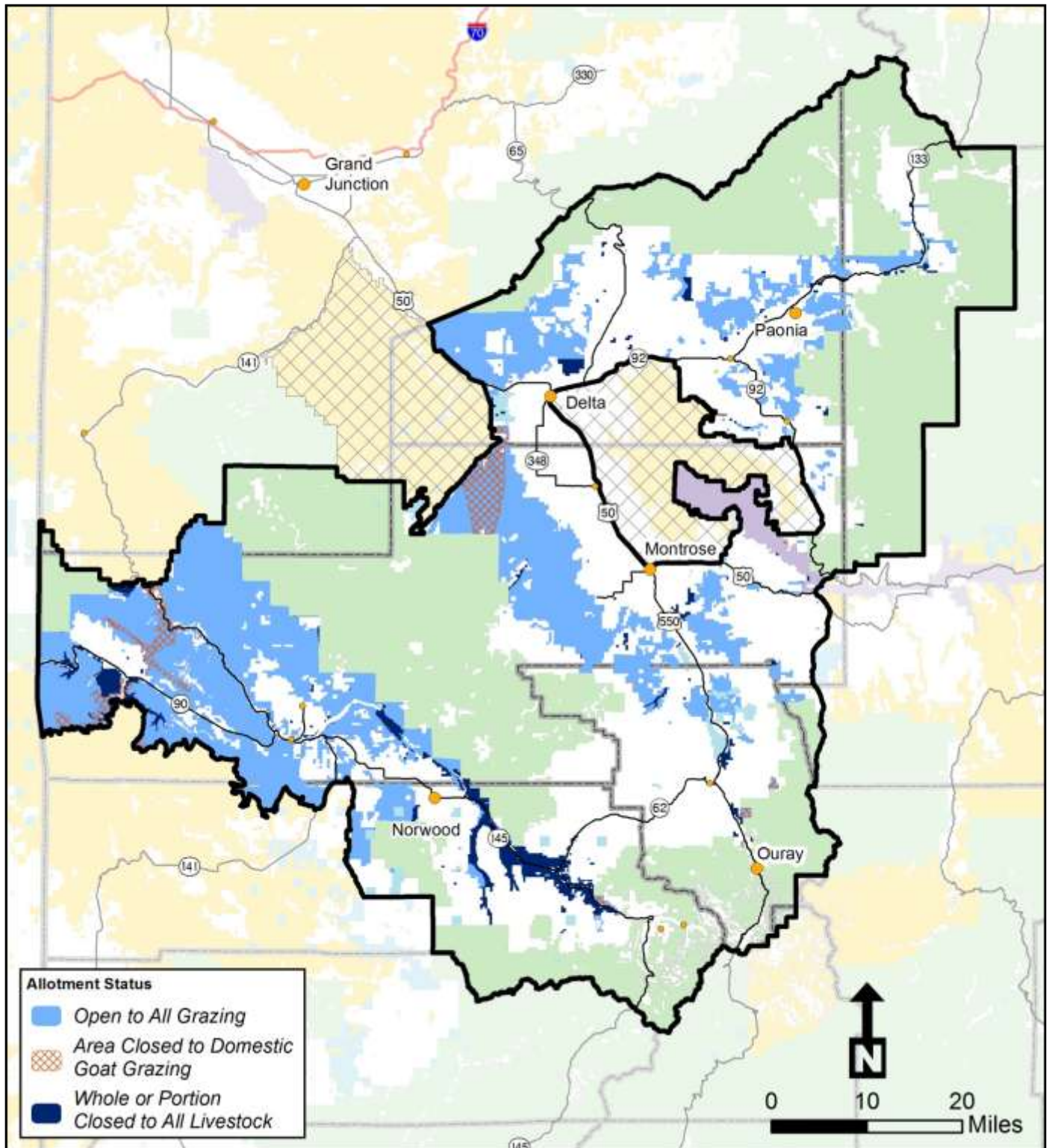


Figure 2-14: Alternative D: Grazing Allotments

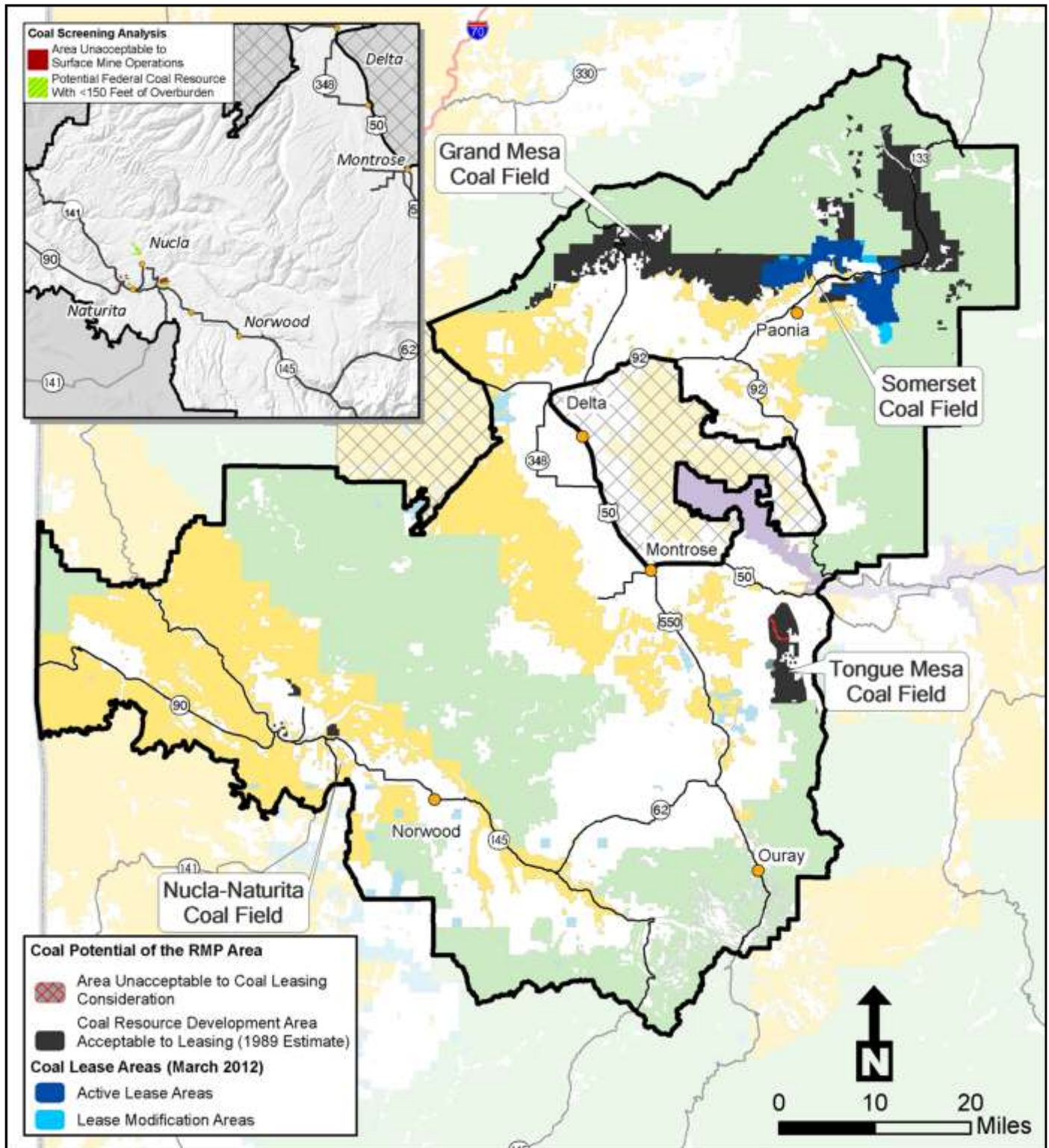


Figure 2-15: Alternative A: Coal Leasing



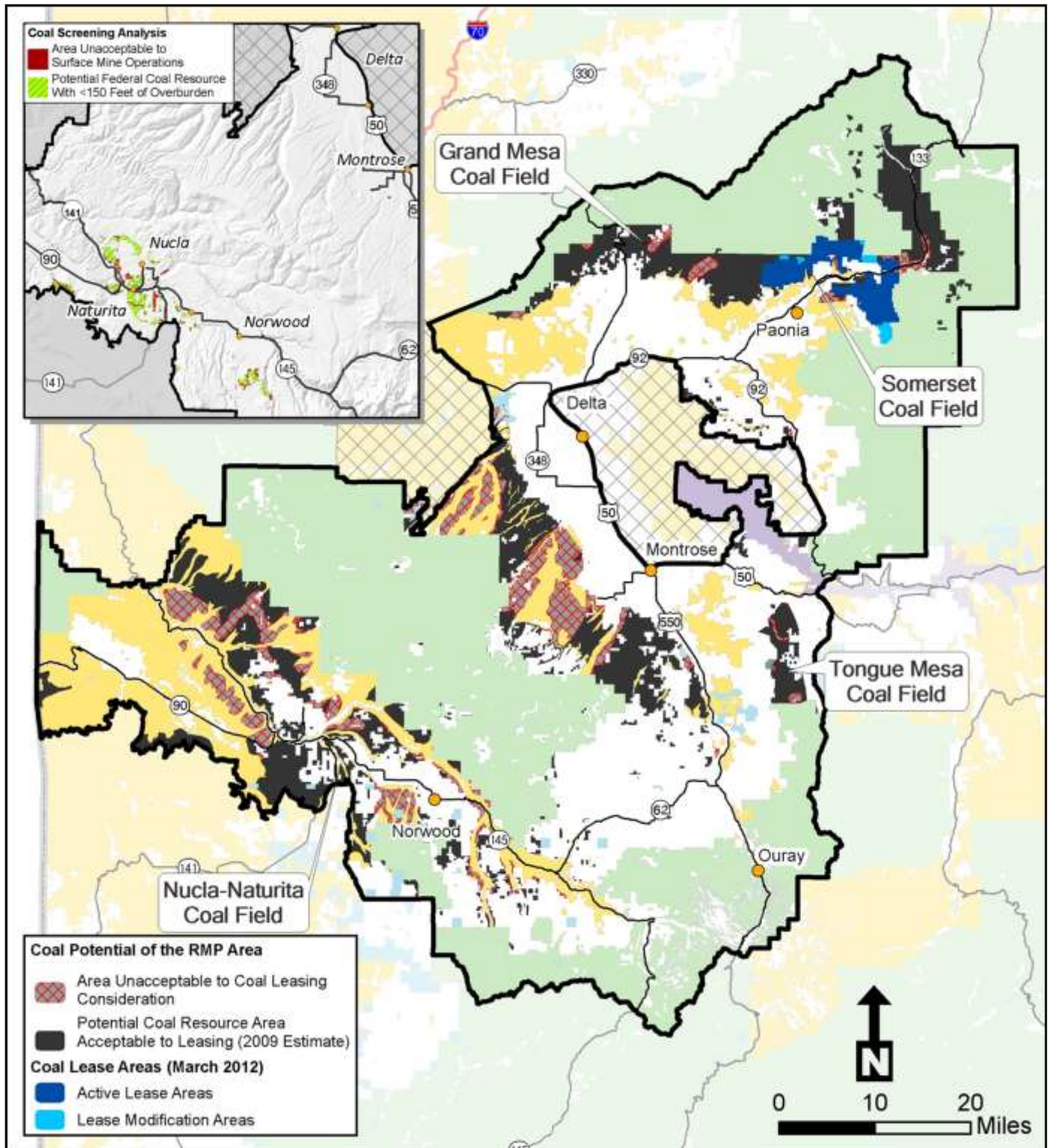


Figure 2-16: Alternative B: Coal Leasing



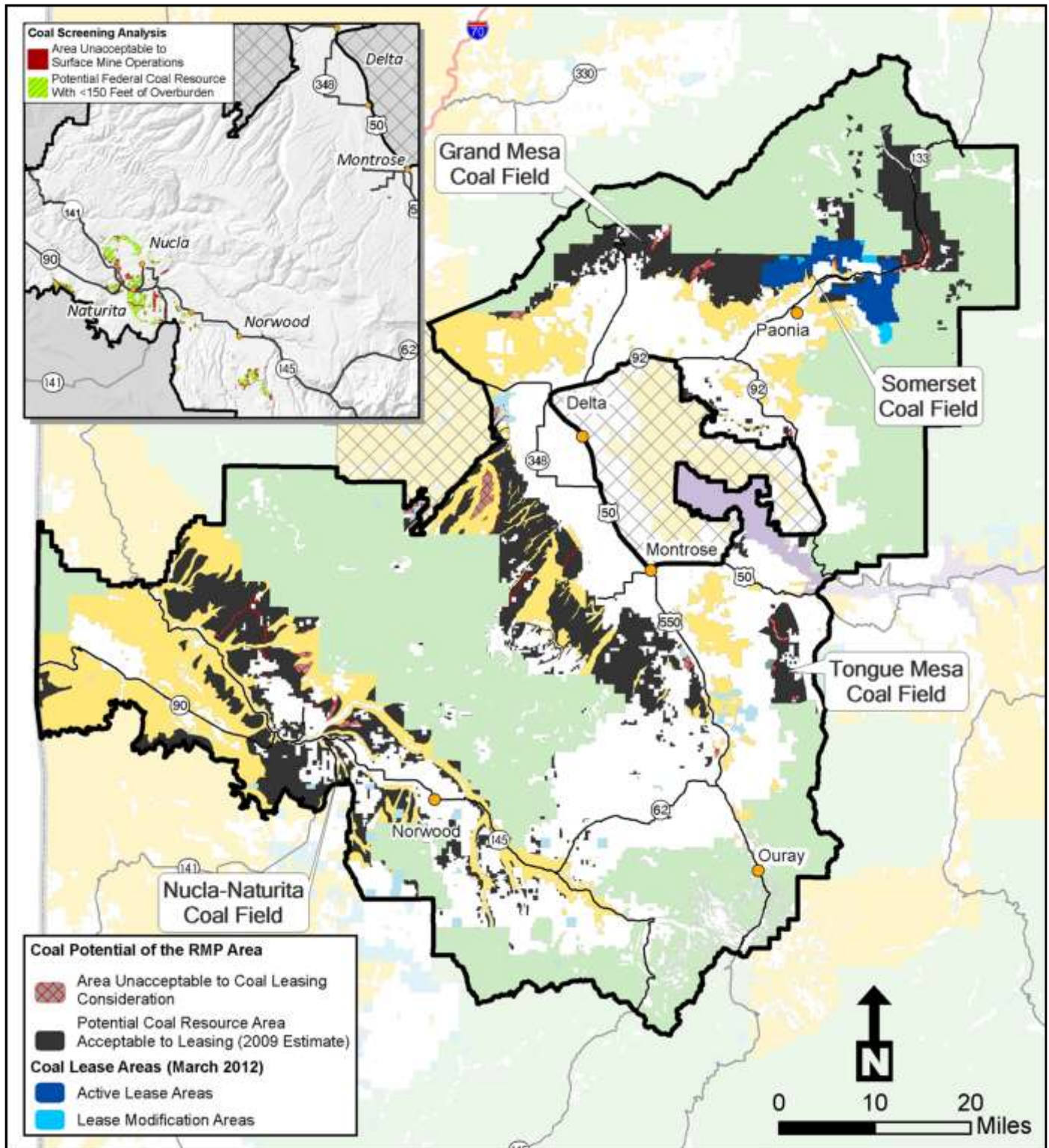


Figure 2-17: Alternative C: Coal Leasing



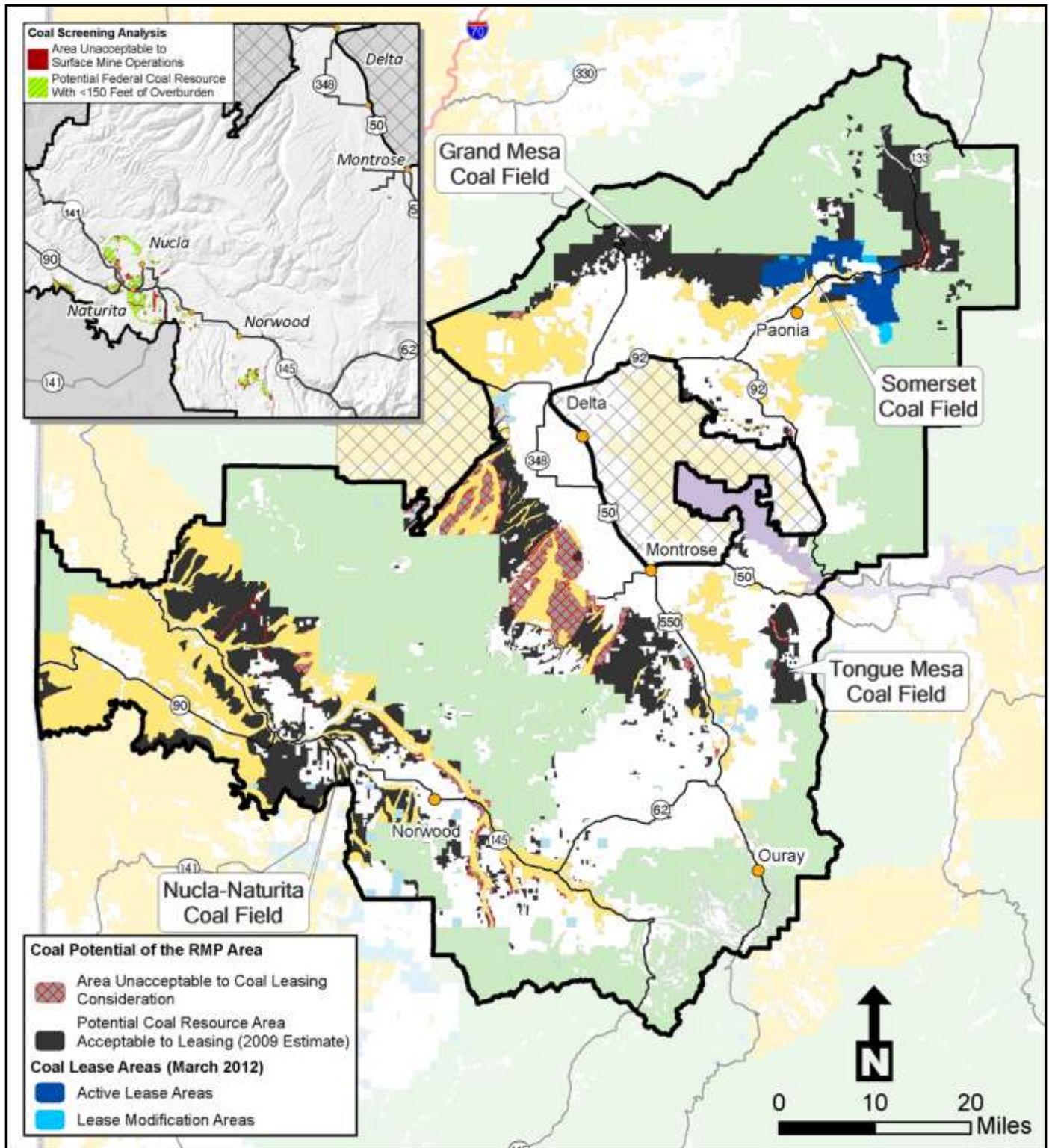


Figure 2-18: Alternative D: Coal Leasing



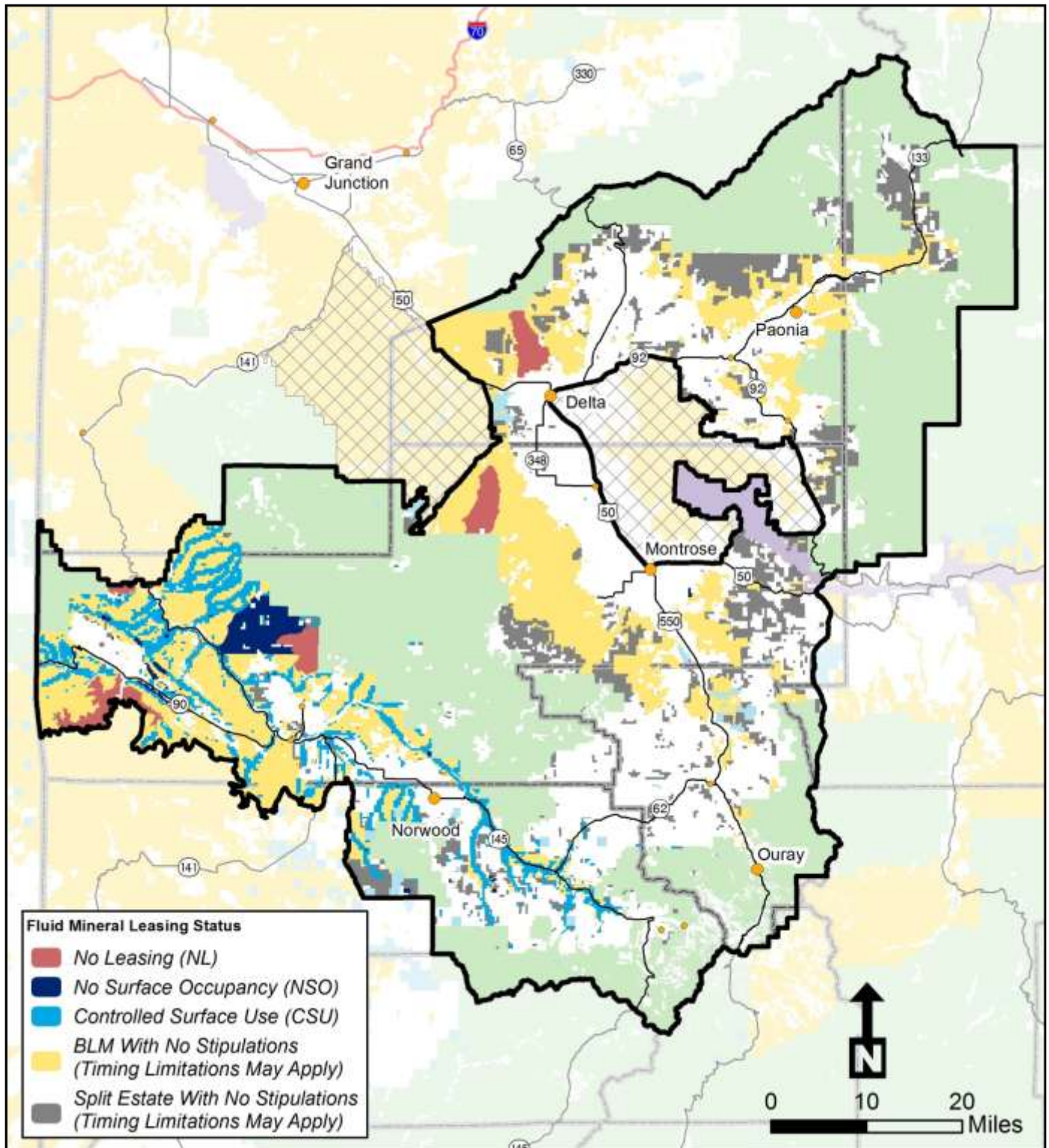


Figure 2-19: Alternative A: Fluid Minerals Leasing

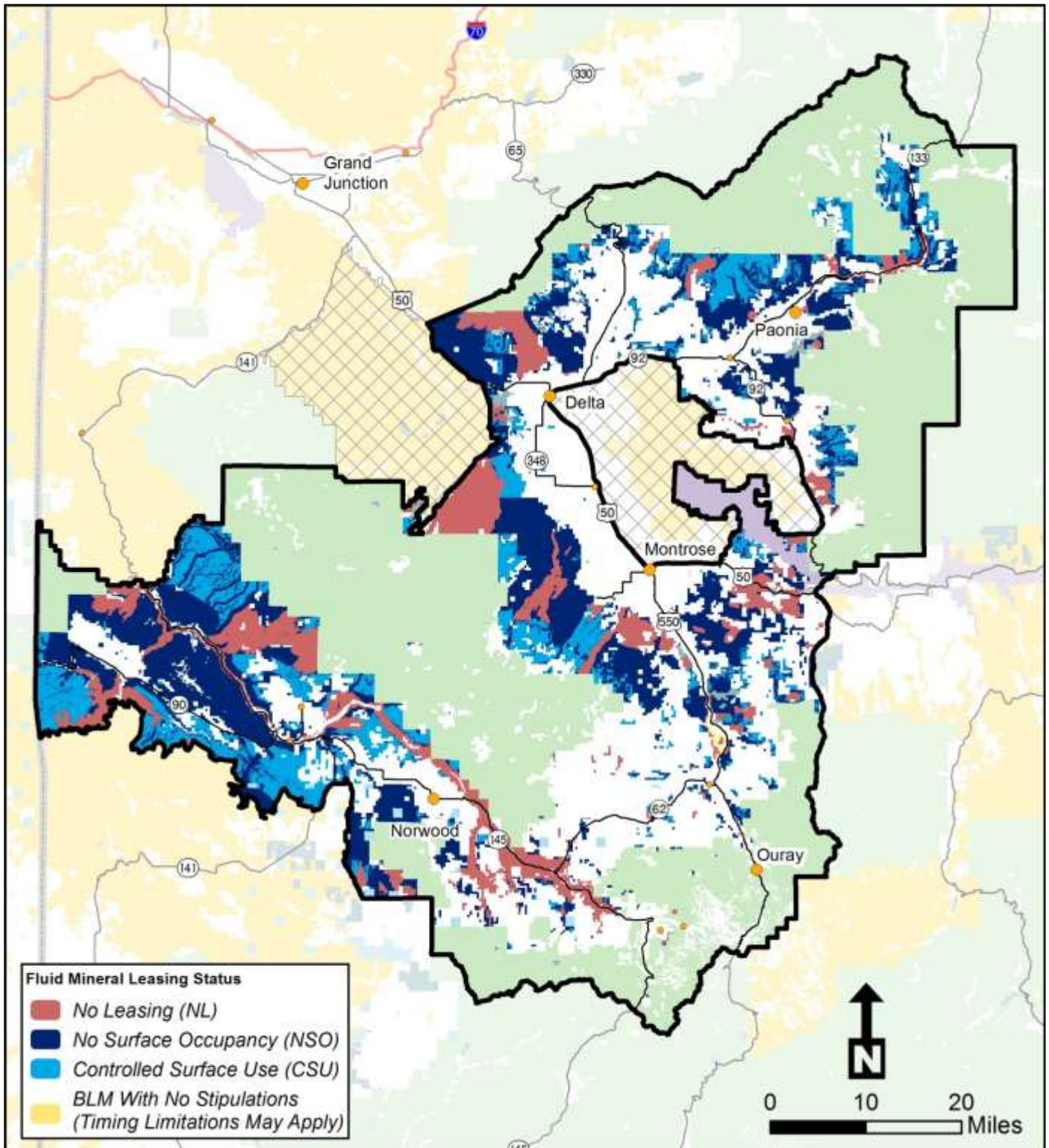


Figure 2-20: Alternative B: Fluid Minerals Leasing



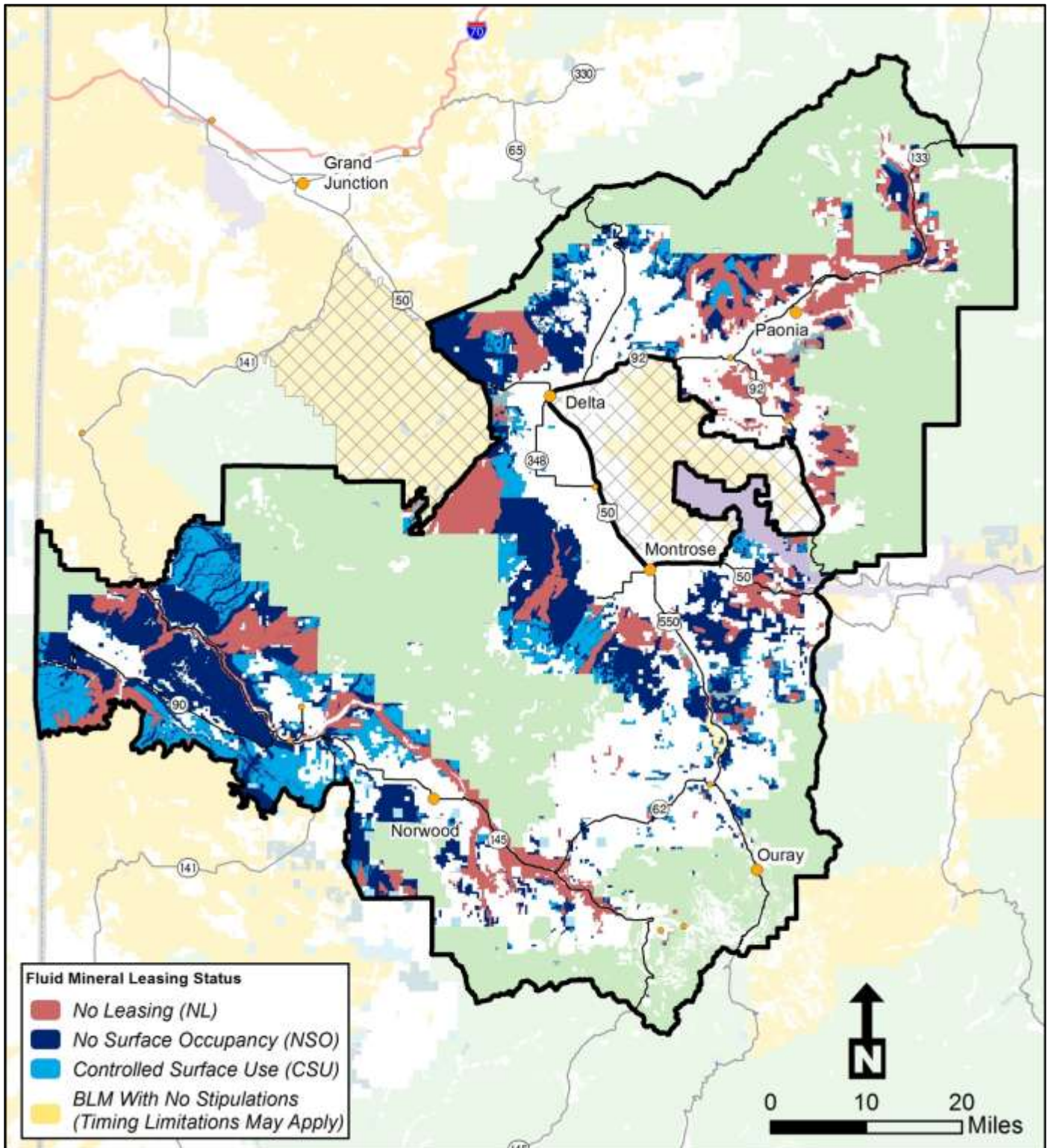


Figure 2-21: Alternative B.I: Fluid Minerals Leasing



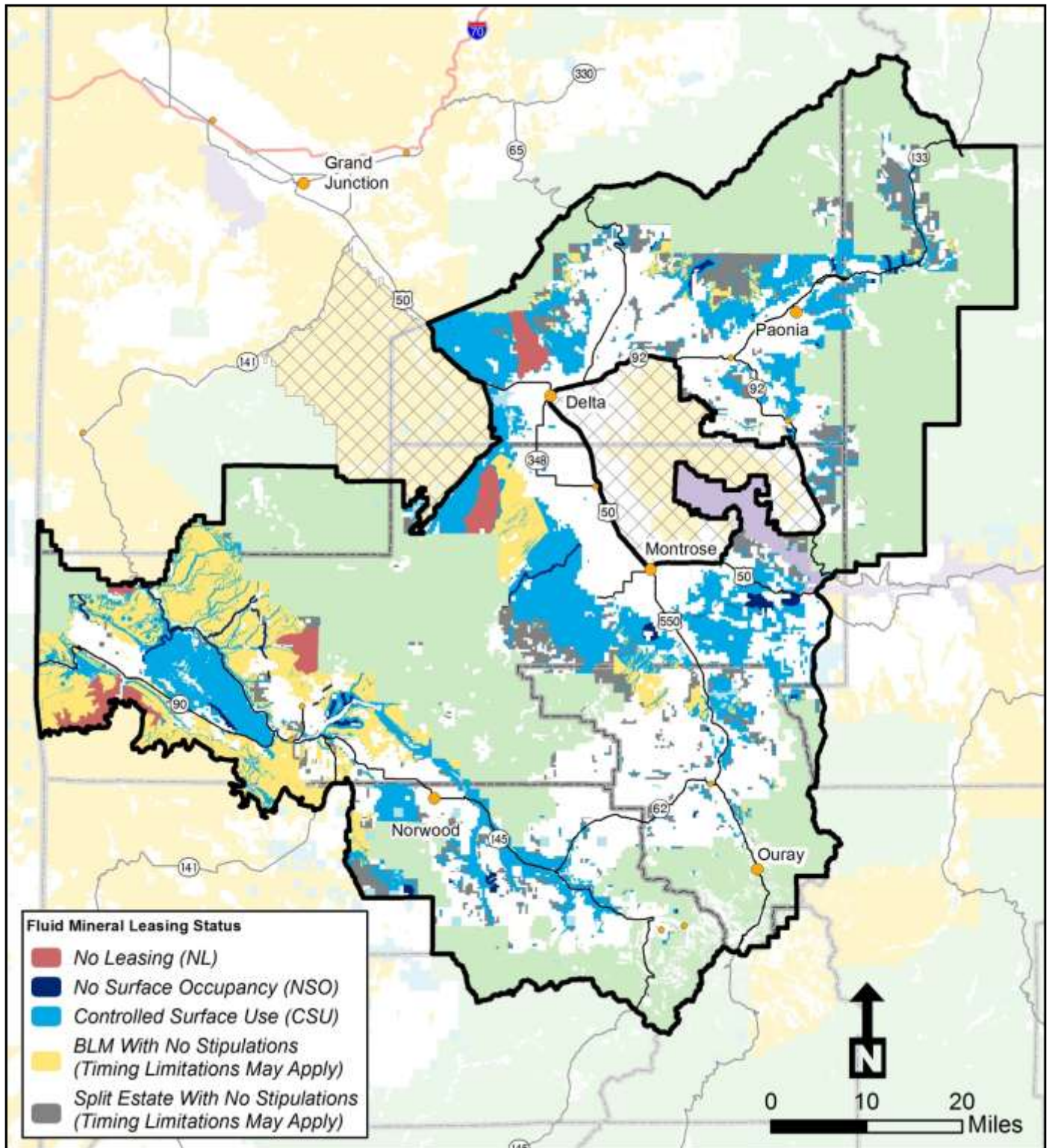


Figure 2-22: Alternative C: Fluid Minerals Leasing



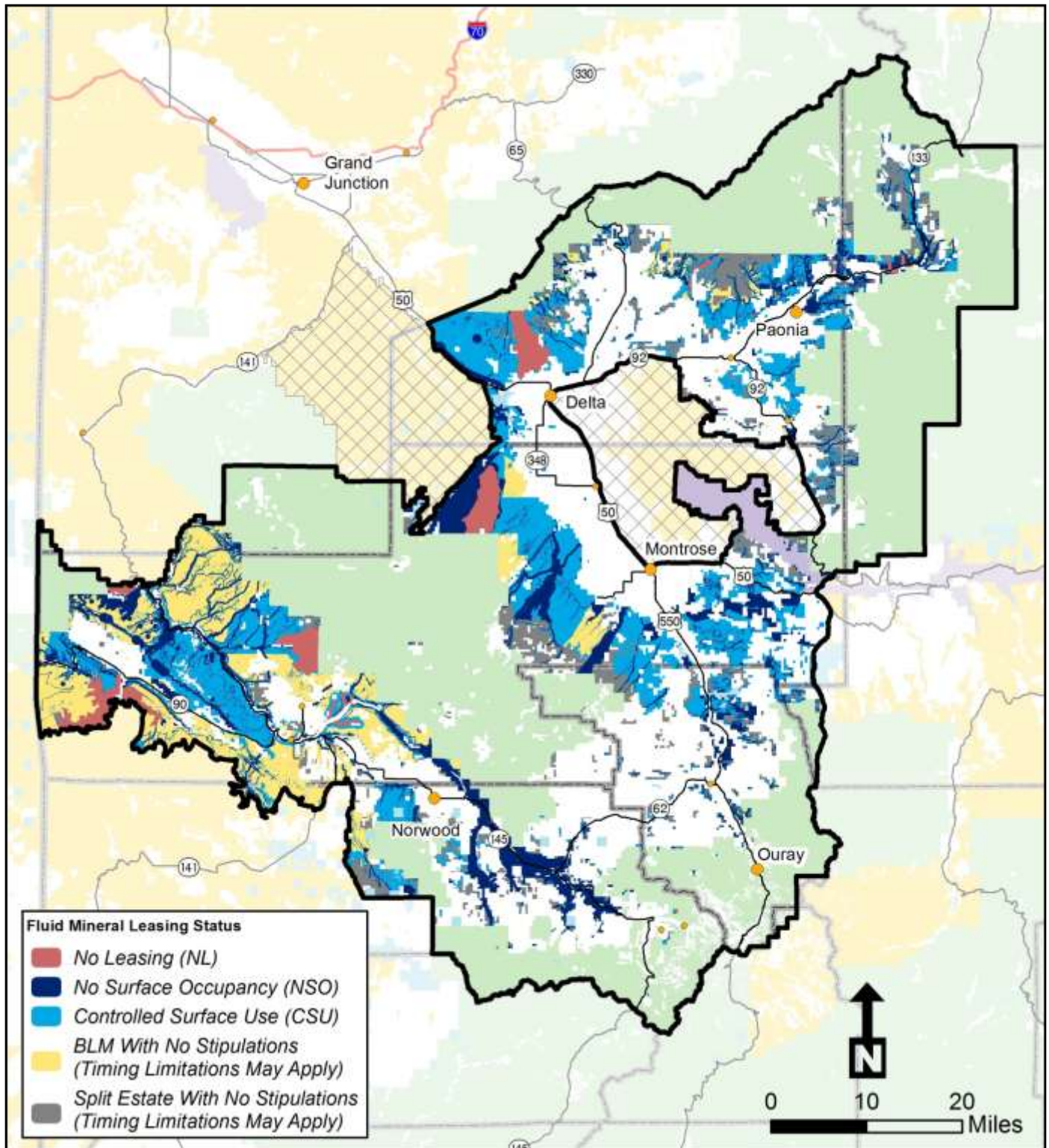


Figure 2-23: Alternative D: Fluid Minerals Leasing



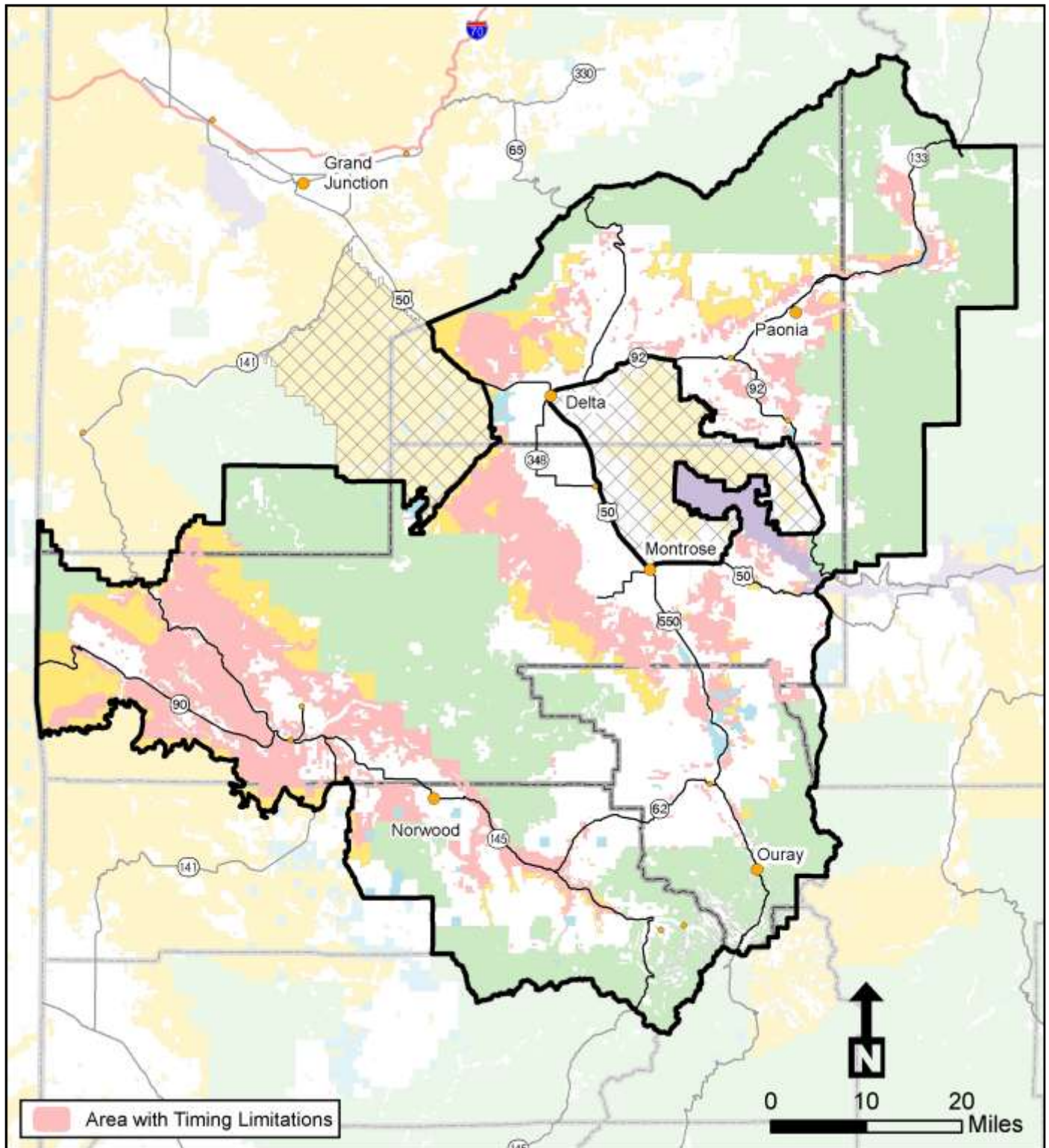


Figure 2-24: Alternative A: Timing Limitation Stipulations for Fluid Mineral Leasing and Other Surface-disturbing Activities

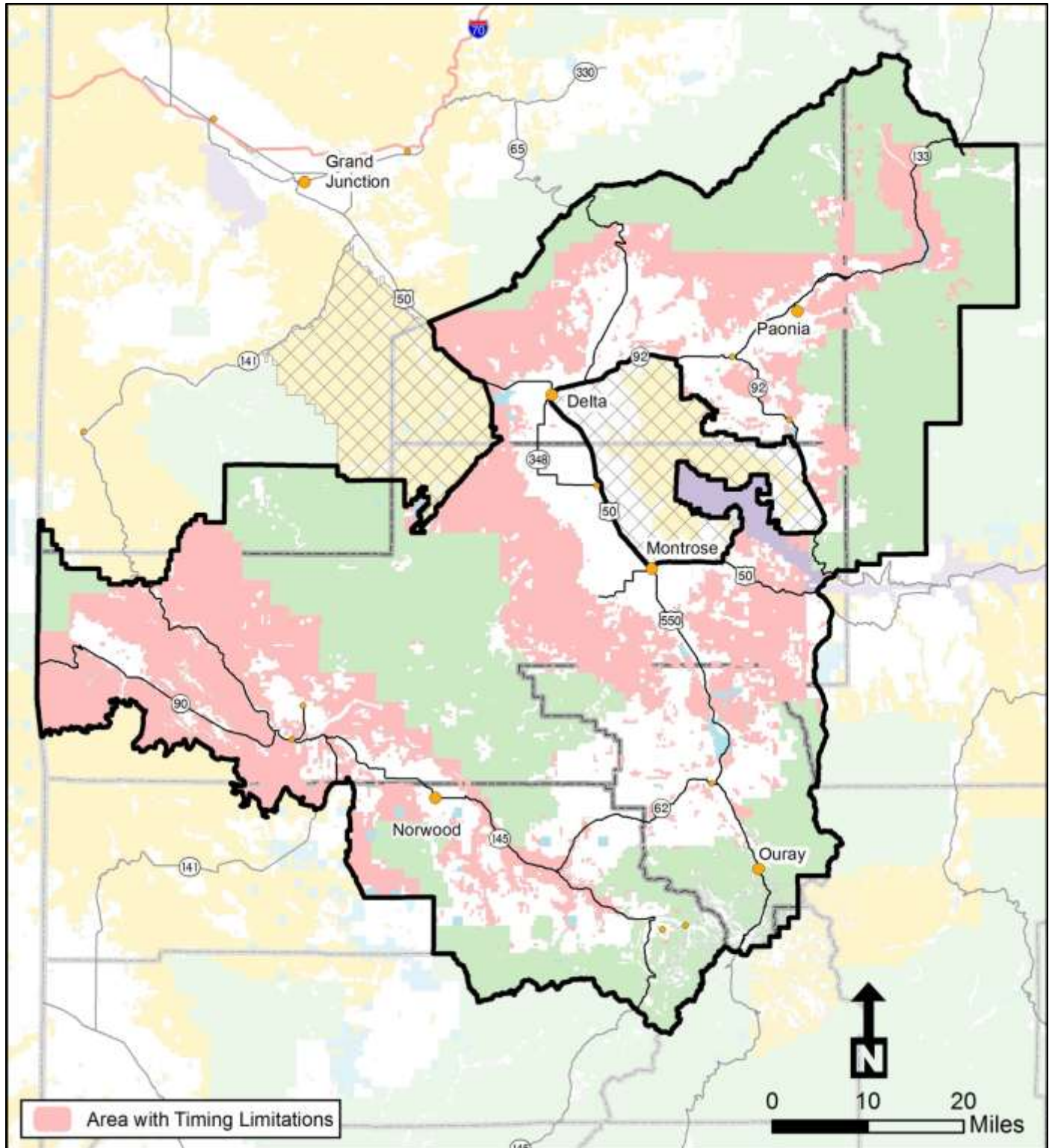


Figure 2-25: Alternative B: Timing Limitation Stipulations for Fluid Mineral Leasing and Other Surface-disturbing Activities



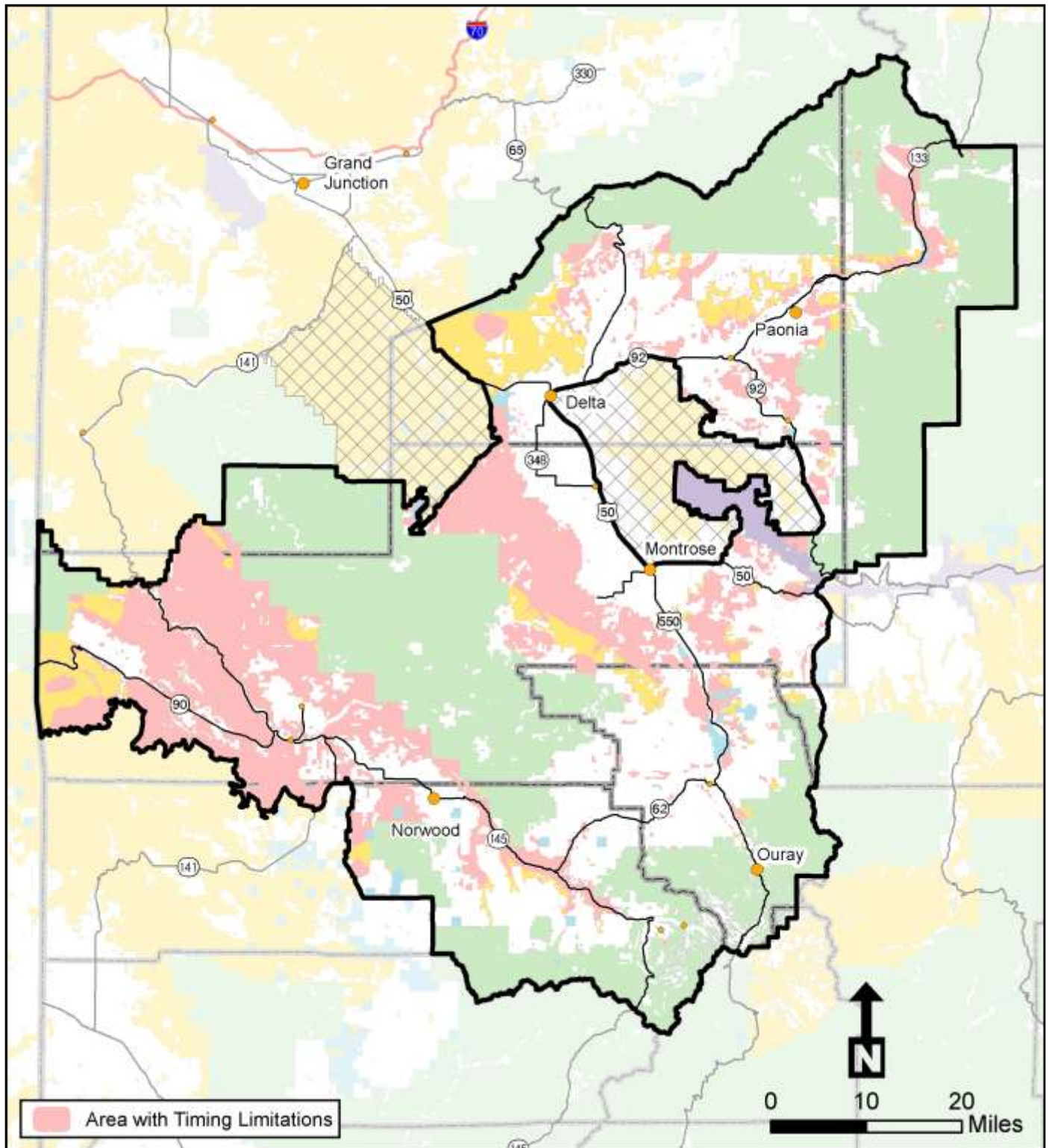


Figure 2-26: Alternative C: Timing Limitation Stipulations for Fluid Mineral Leasing and Other Surface-disturbing Activities

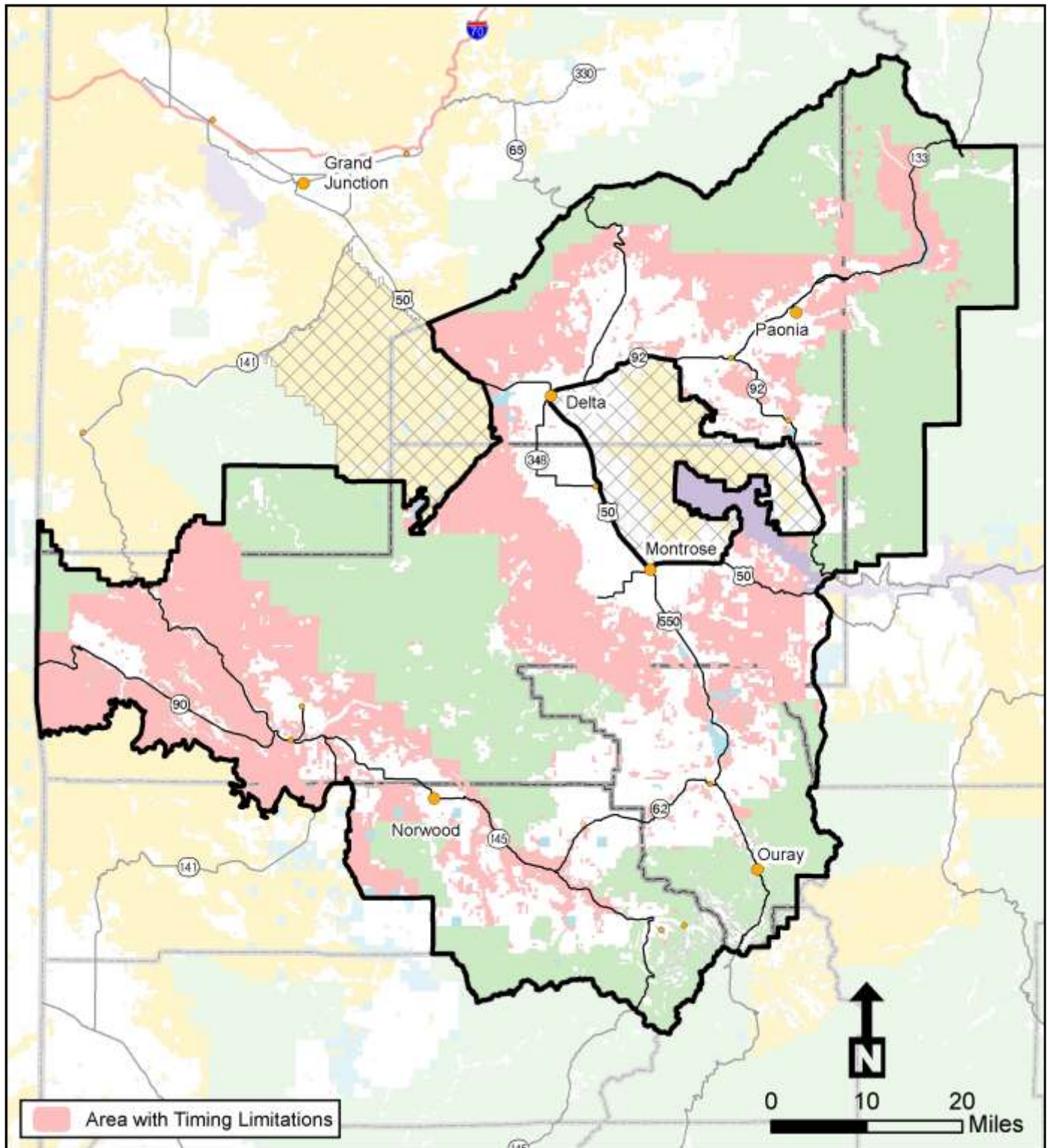


Figure 2-27: Alternative D: Timing Limitation Stipulations for Fluid Mineral Leasing and Other Surface-disturbing Activities



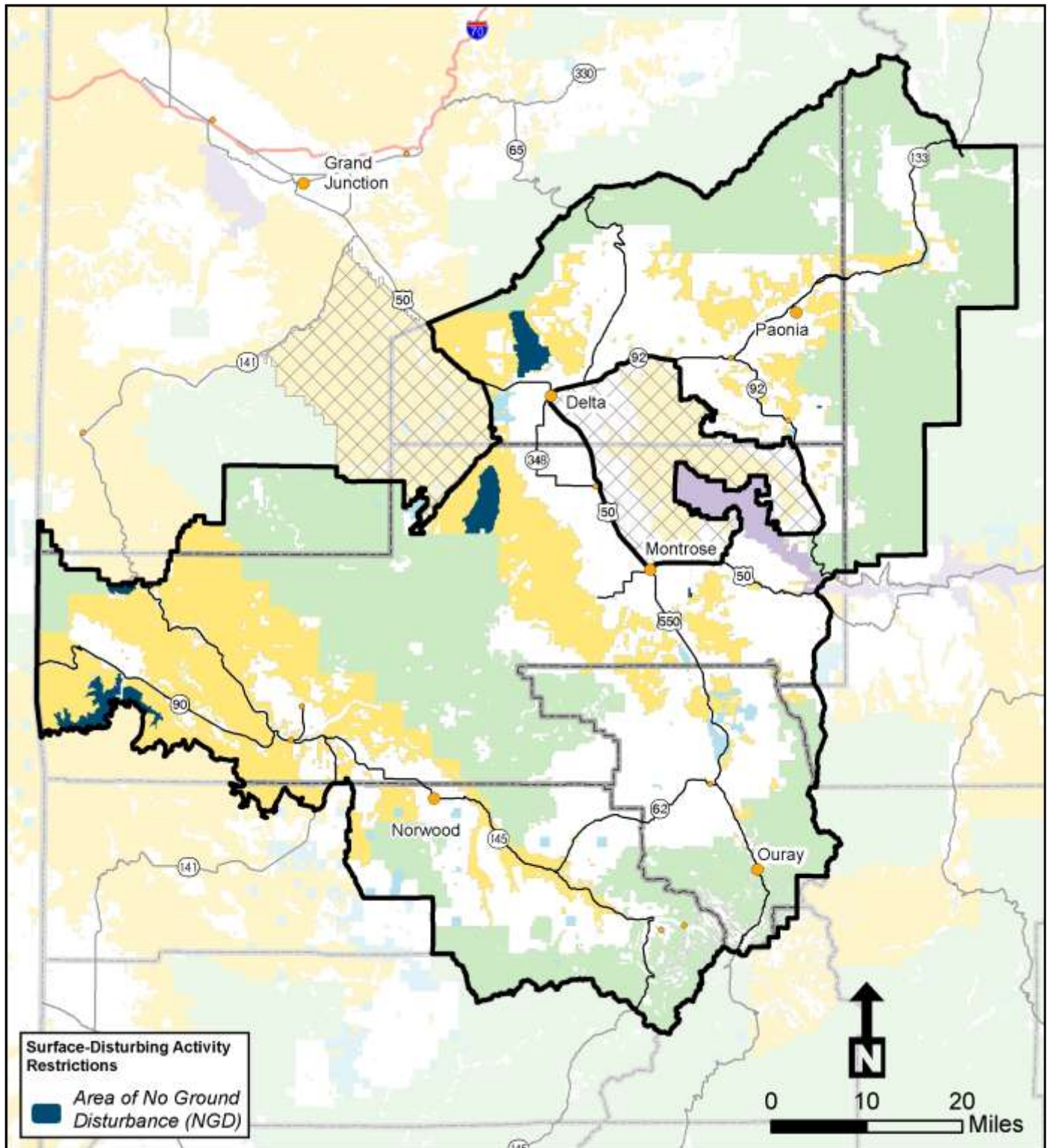


Figure 2-28: Alternative A: Restrictions for Other Surface-disturbing Activities

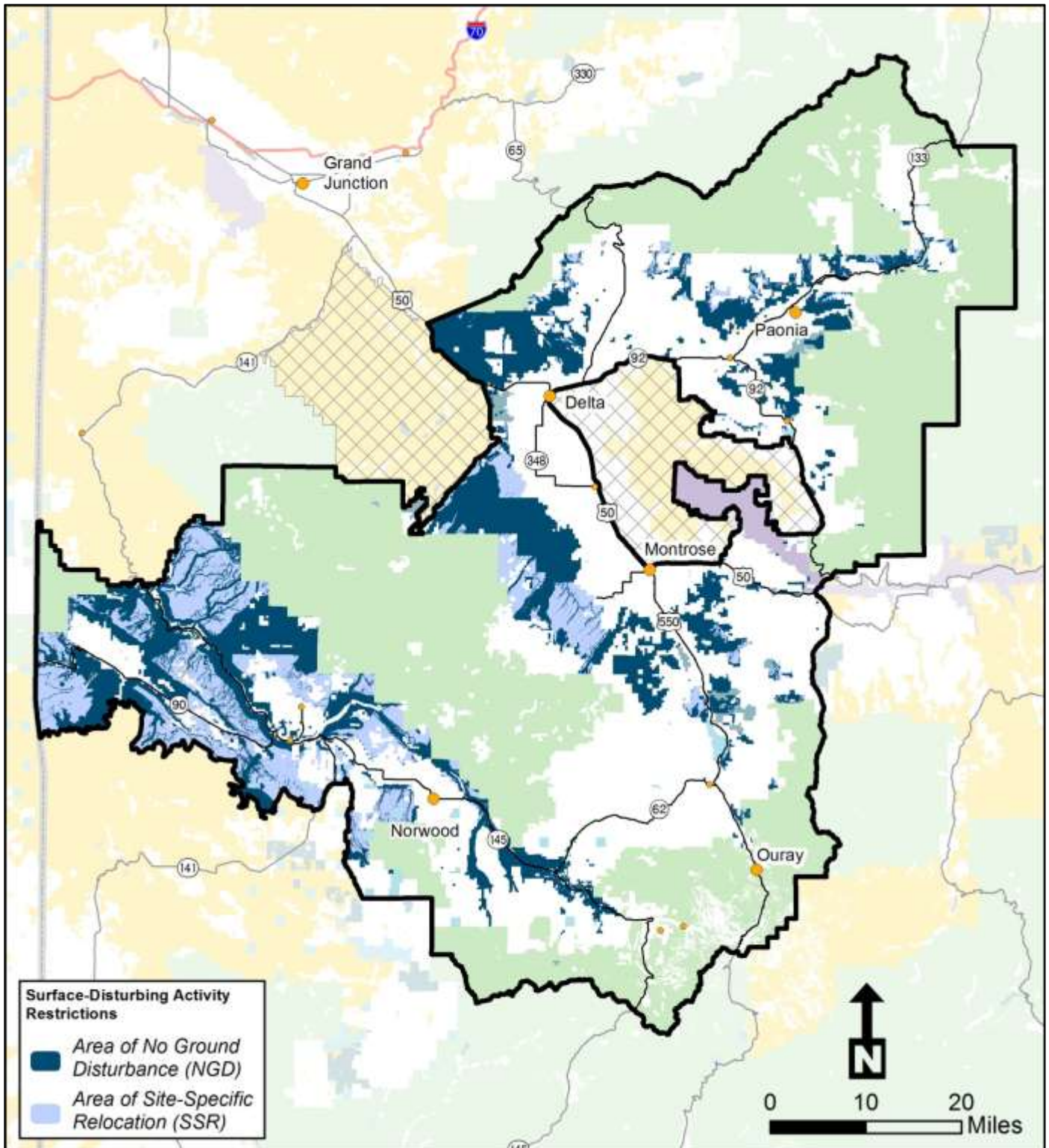


Figure 2-29: Alternative B: Restrictions for Other Surface-disturbing Activities



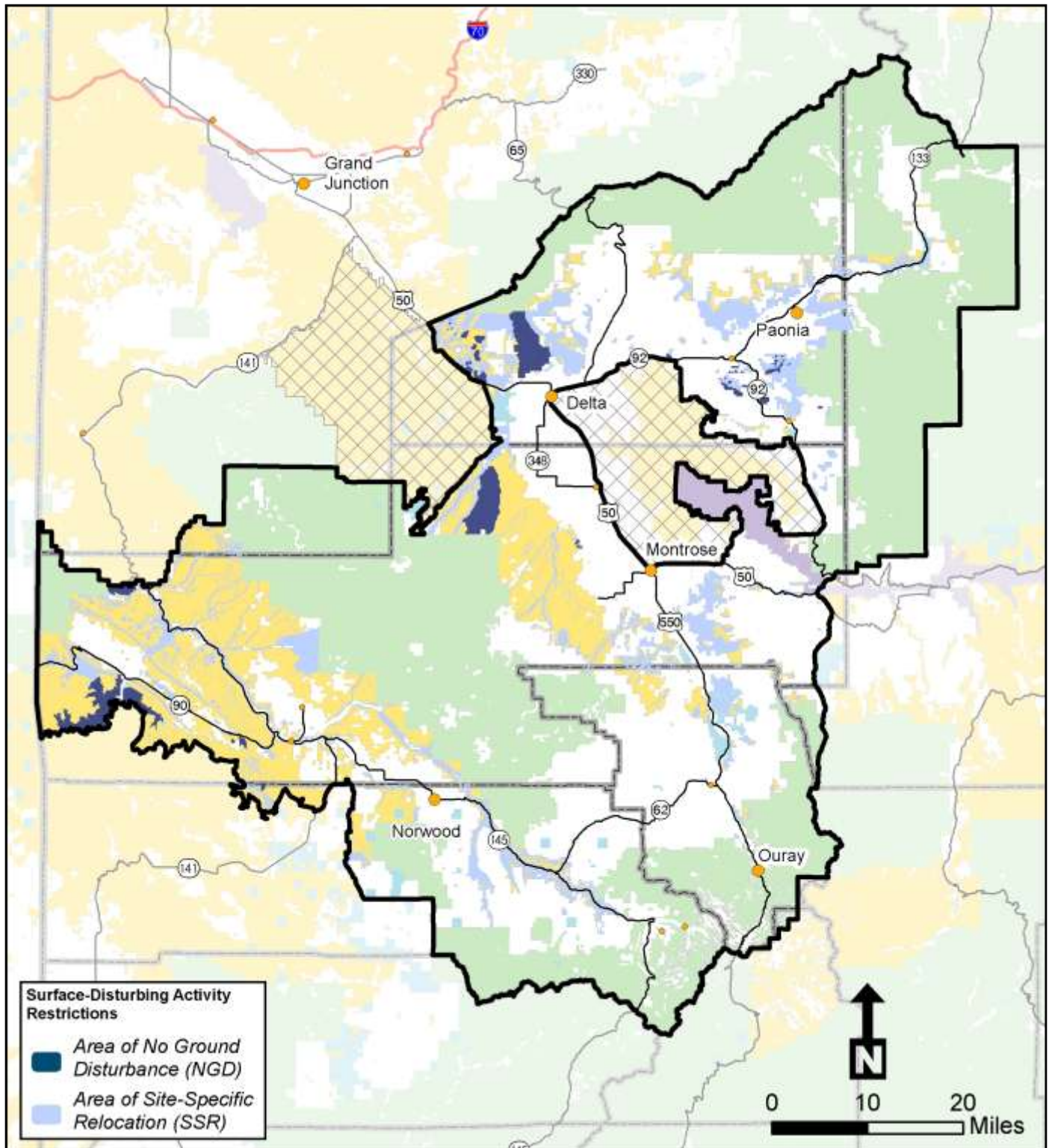


Figure 2-30: Alternative C: Restrictions for Other Surface-disturbing Activities

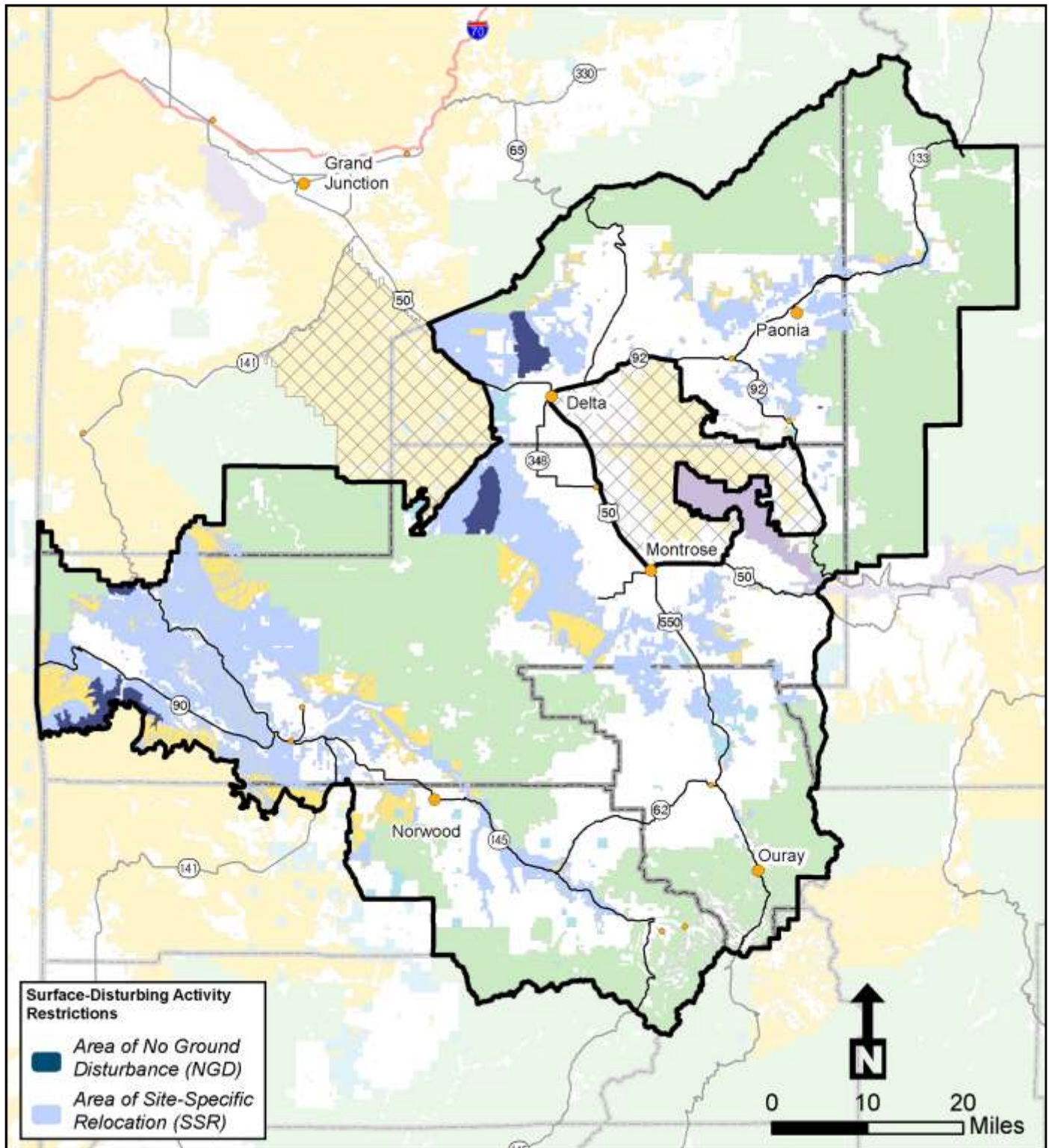


Figure 2-31: Alternative D: Restrictions for Other Surface-disturbing Activities



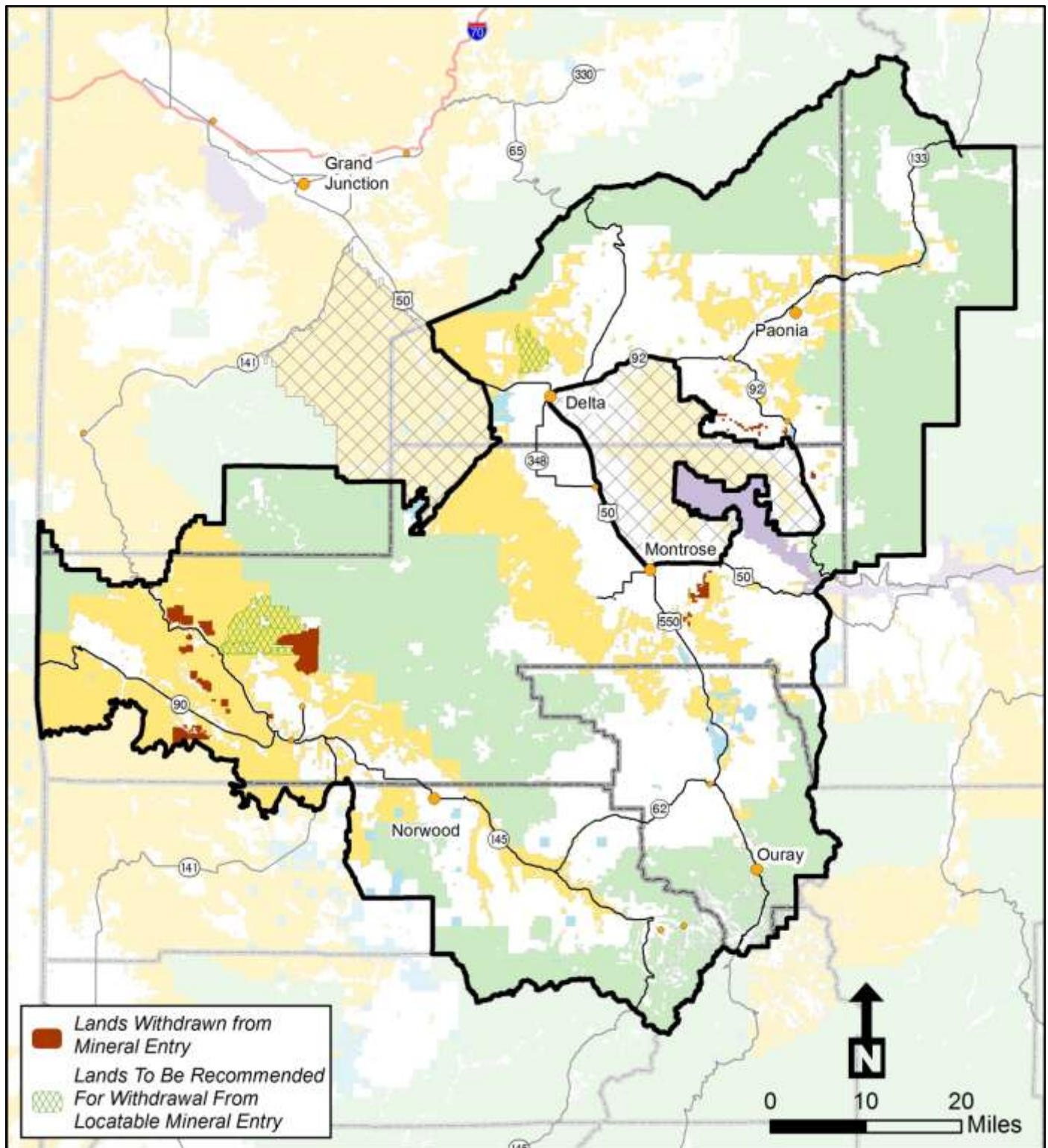


Figure 2-32: Alternative A: Lands Withdrawn and to be Recommended for Withdrawal from Locatable Mineral Entry

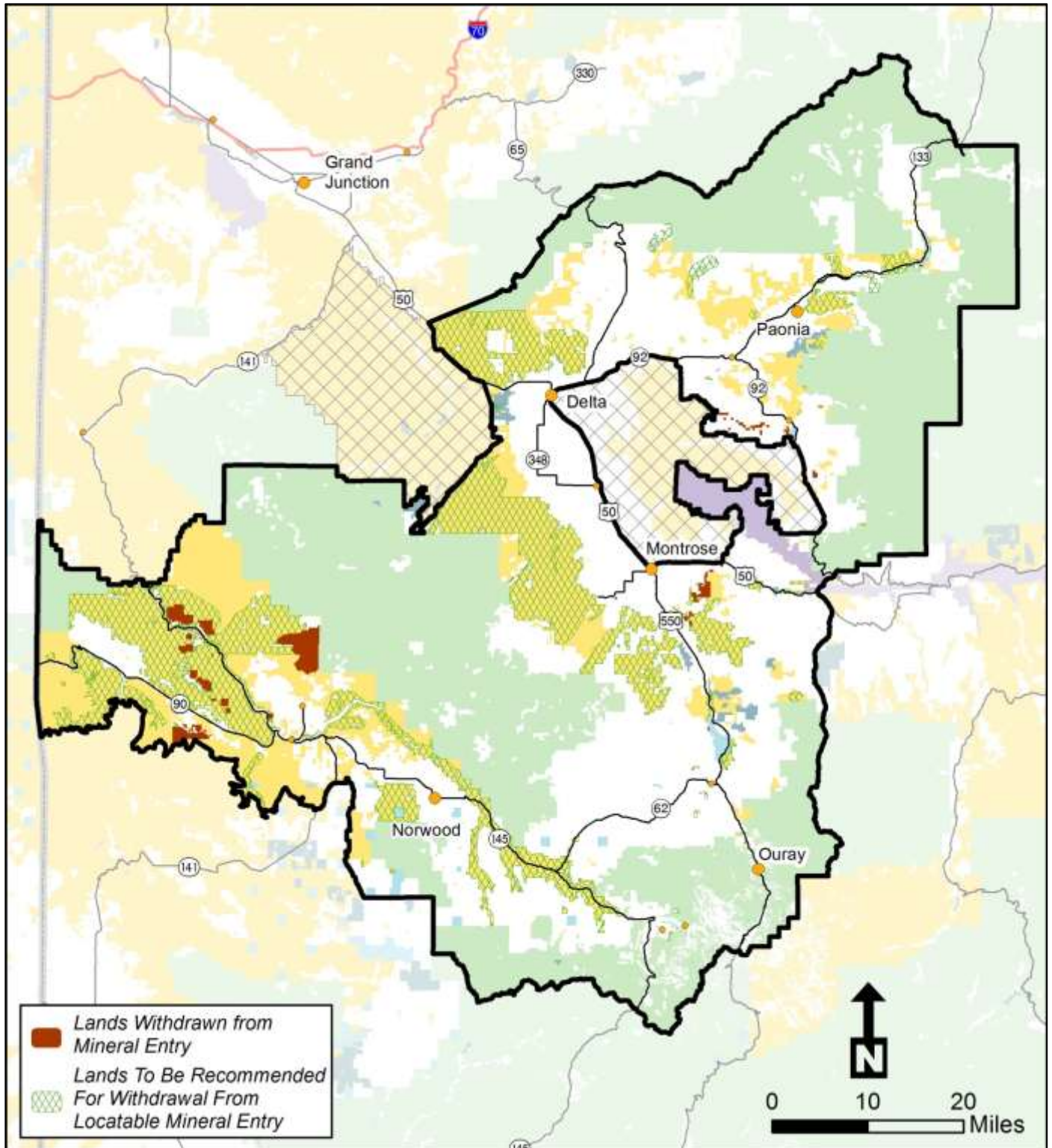


Figure 2-33: Alternative B: Lands Withdrawn and to be Recommended for Withdrawal from Locatable Mineral Entry



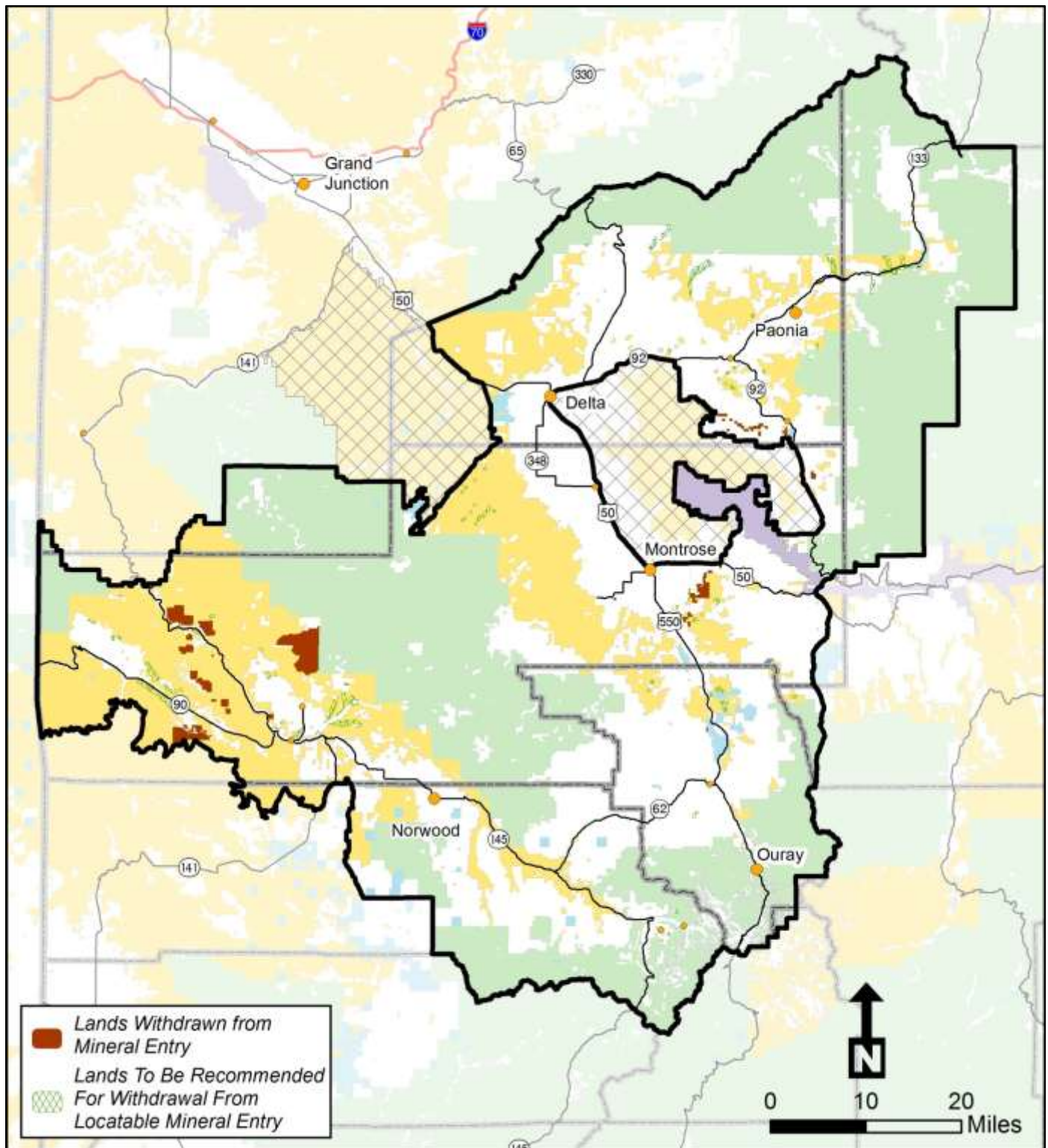


Figure 2-34: Alternative C: Lands Withdrawn and to be Recommended for Withdrawal from Locatable Mineral Entry

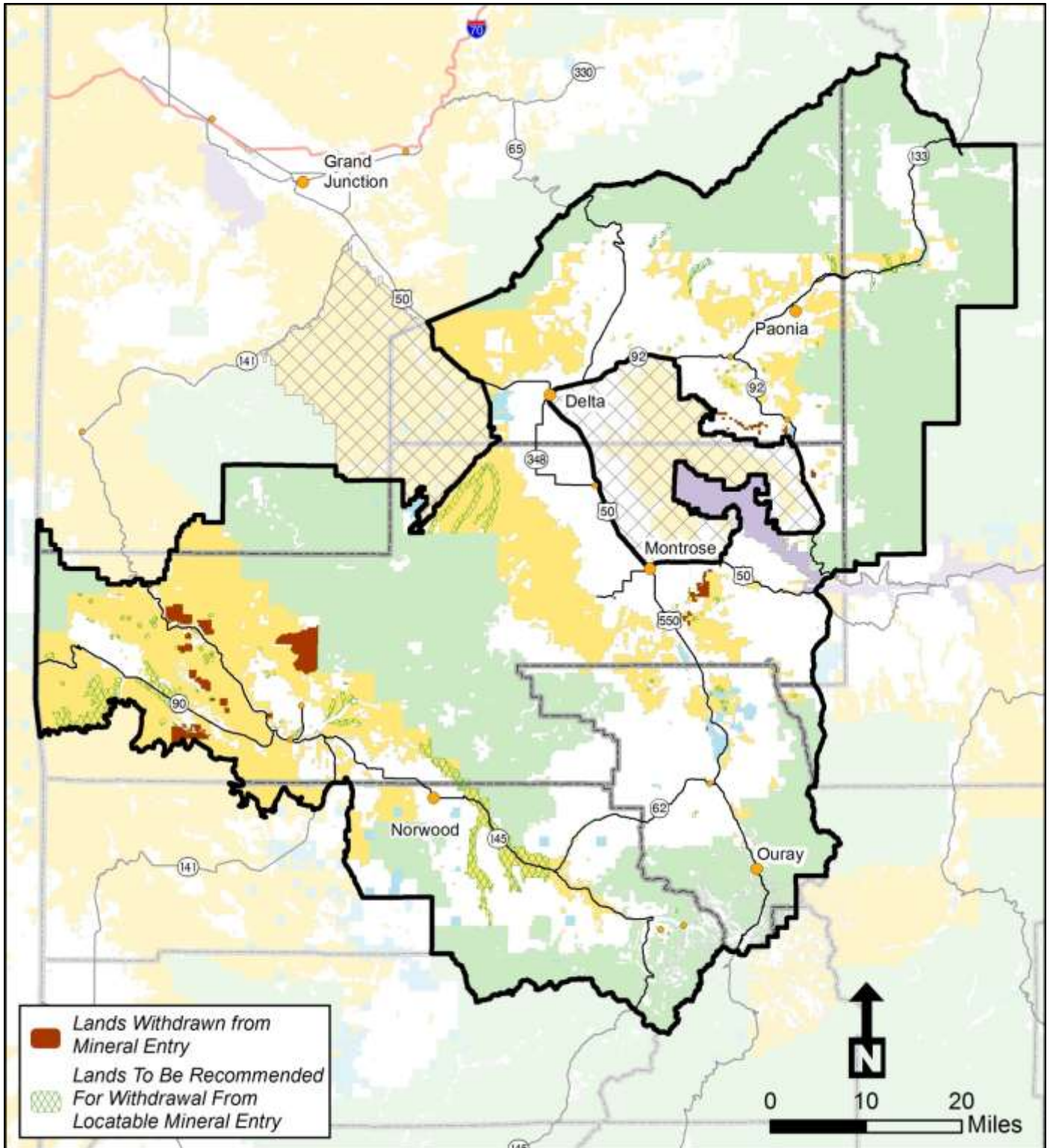


Figure 2-35: Alternative D: Lands Withdrawn and to be Recommended for Withdrawal from Locatable Mineral Entry



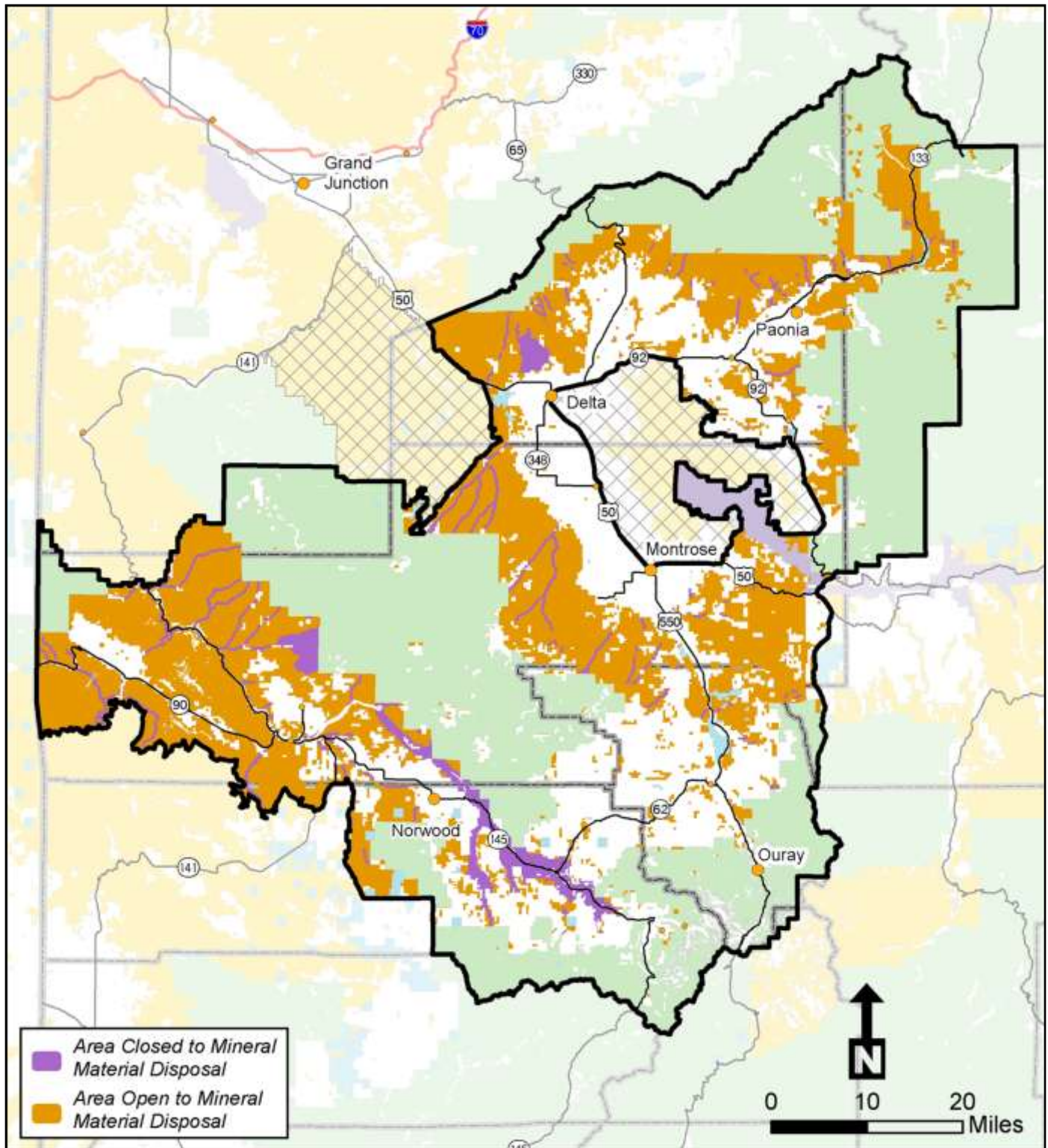


Figure 2-36: Alternative A: Mineral Materials

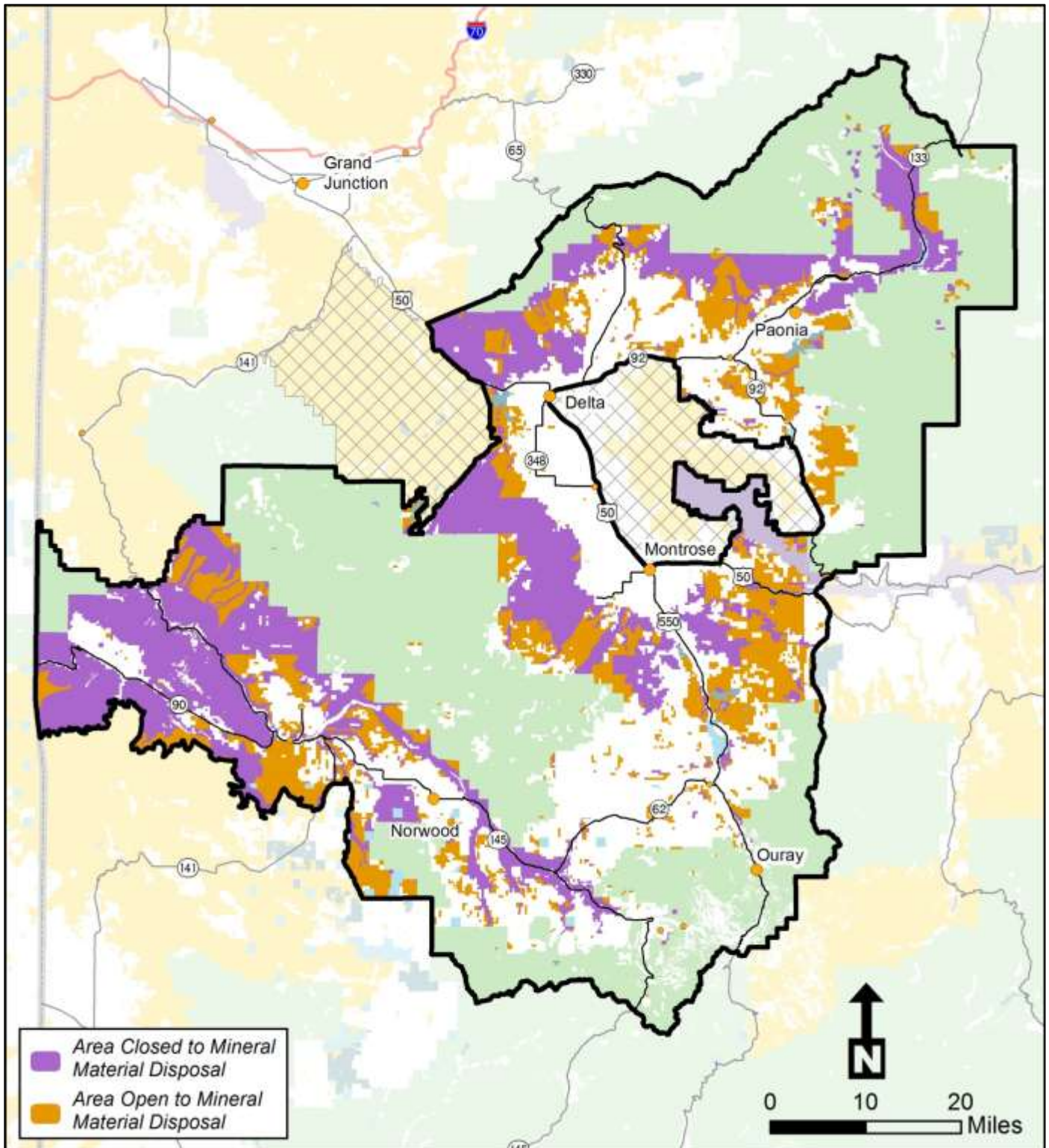


Figure 2-37: Alternative B: Mineral Materials



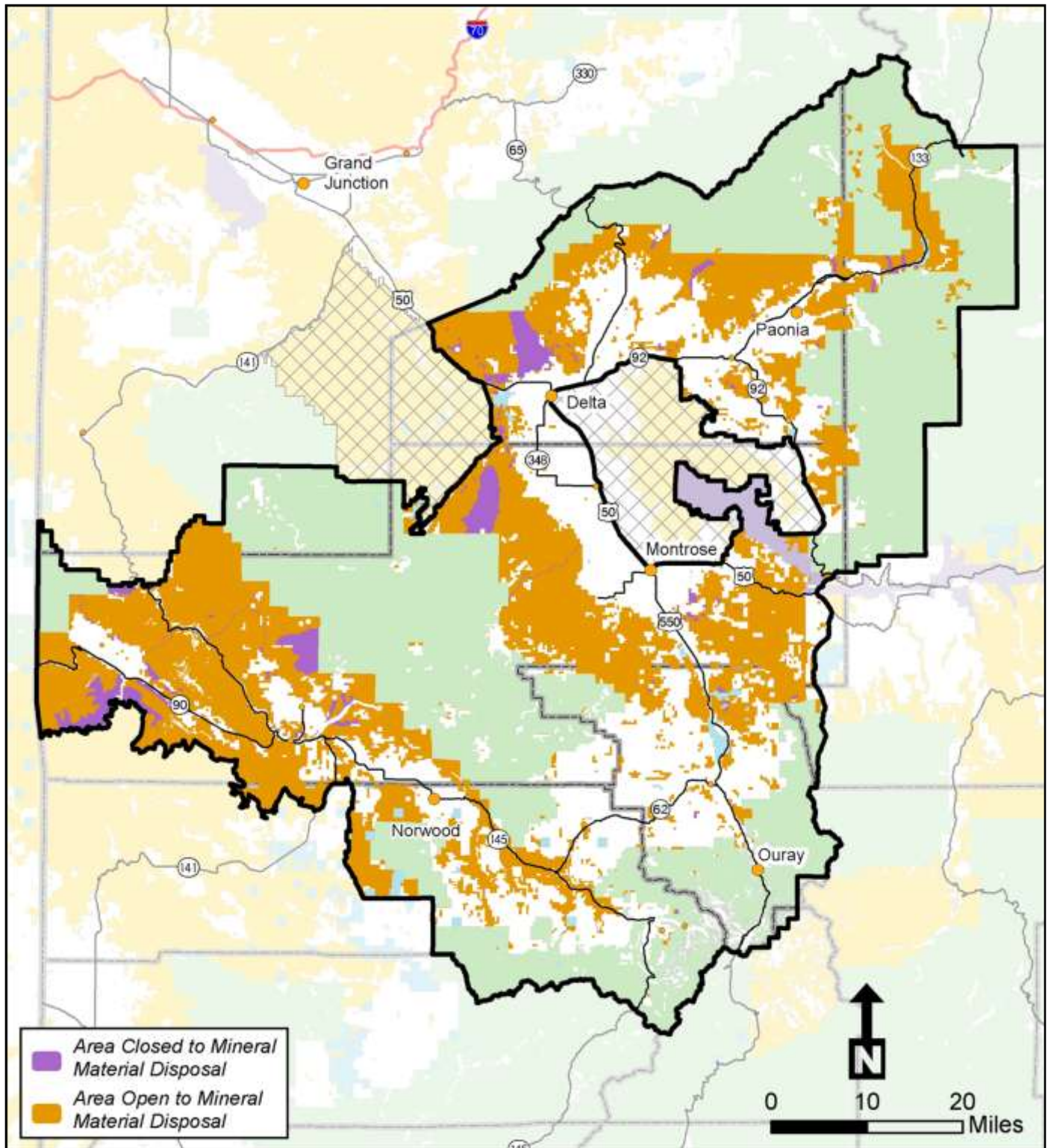


Figure 2-38: Alternative C: Mineral Materials

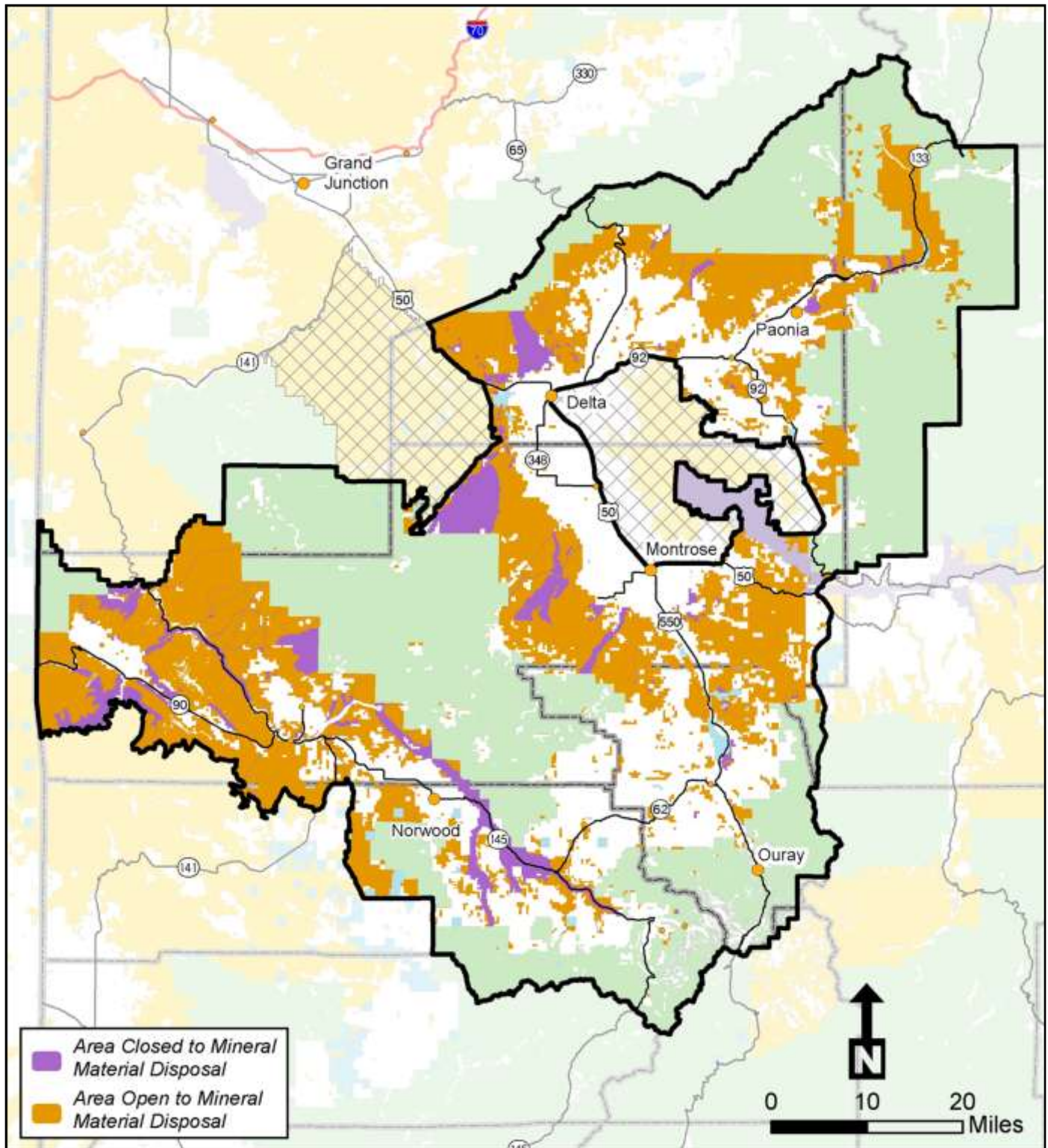


Figure 2-39: Alternative D: Mineral Materials



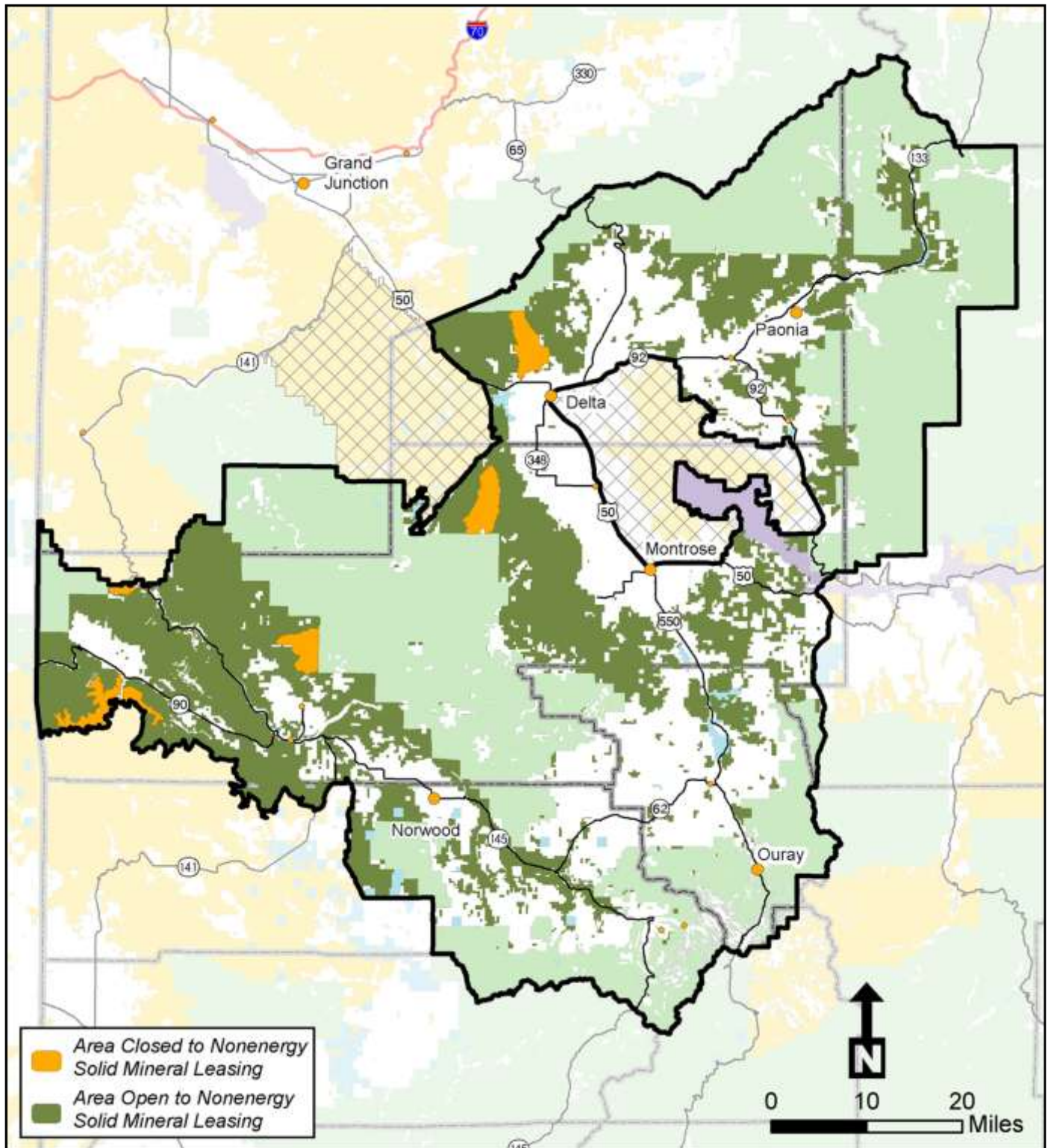


Figure 2-40: Alternative A: Nonenergy Solid Leasable Minerals

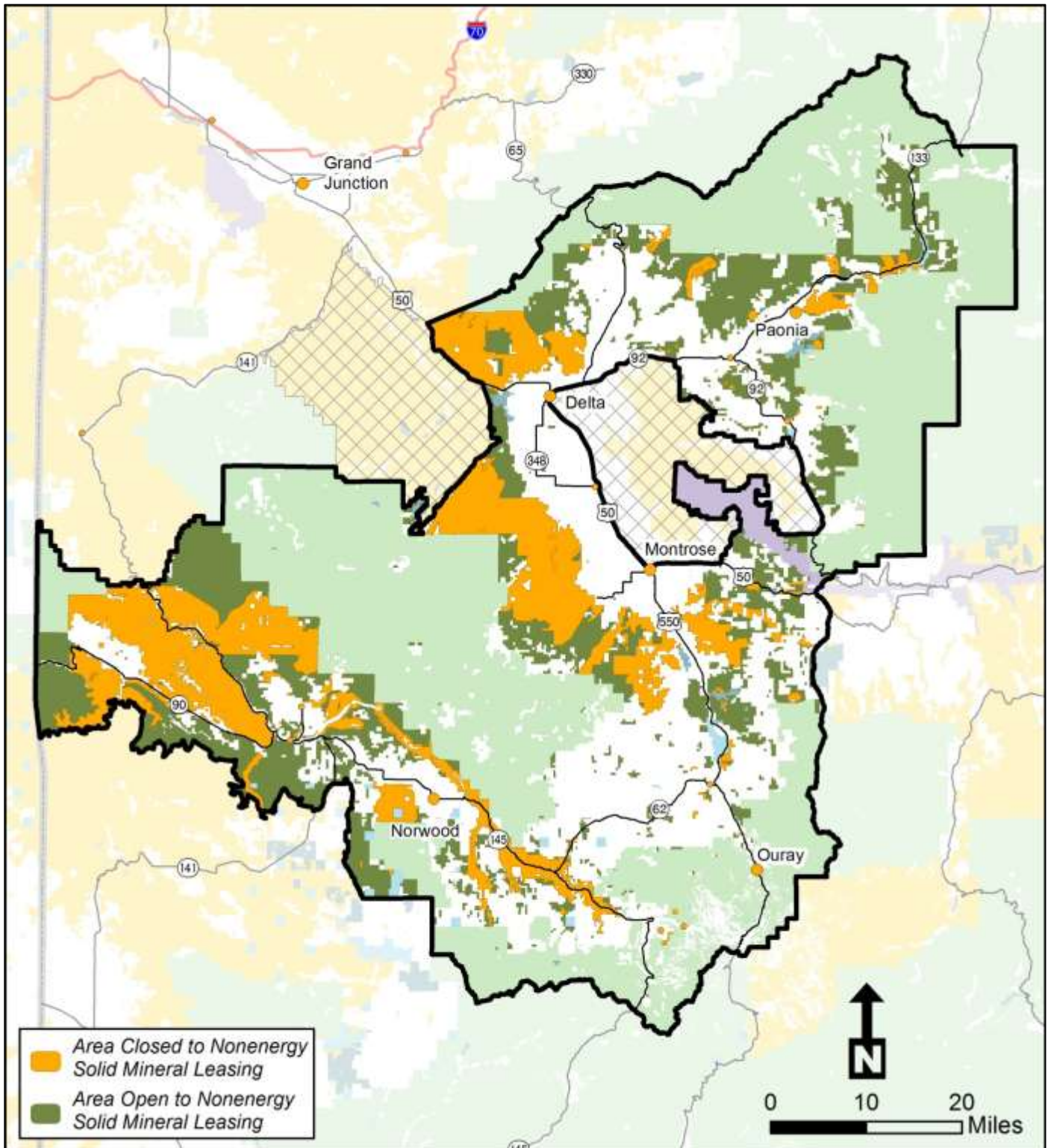


Figure 2-41: Alternative B: Nonenergy Solid Leasable Minerals



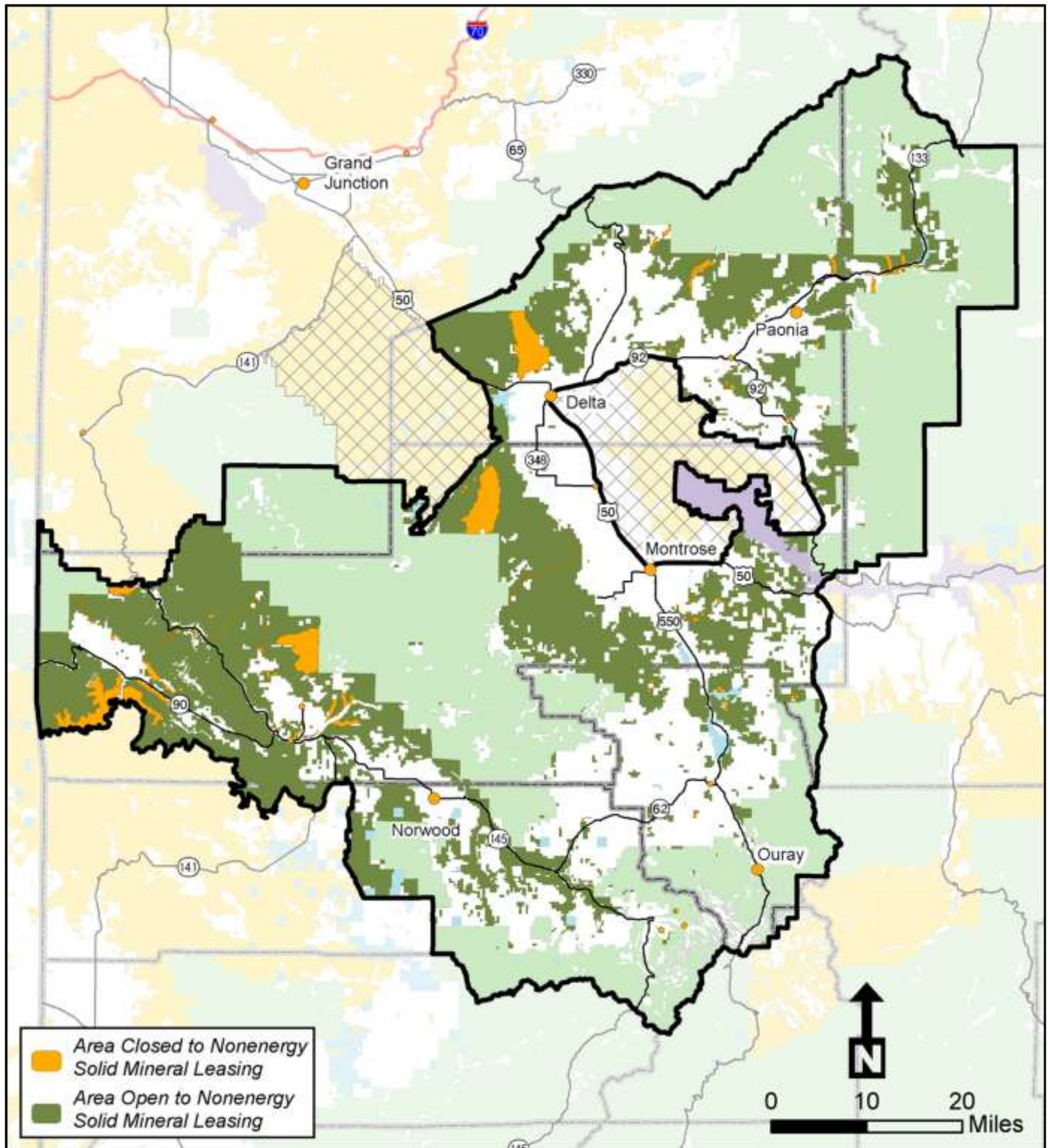


Figure 2-42: Alternative C: Nonenergy Solid Leasable Minerals

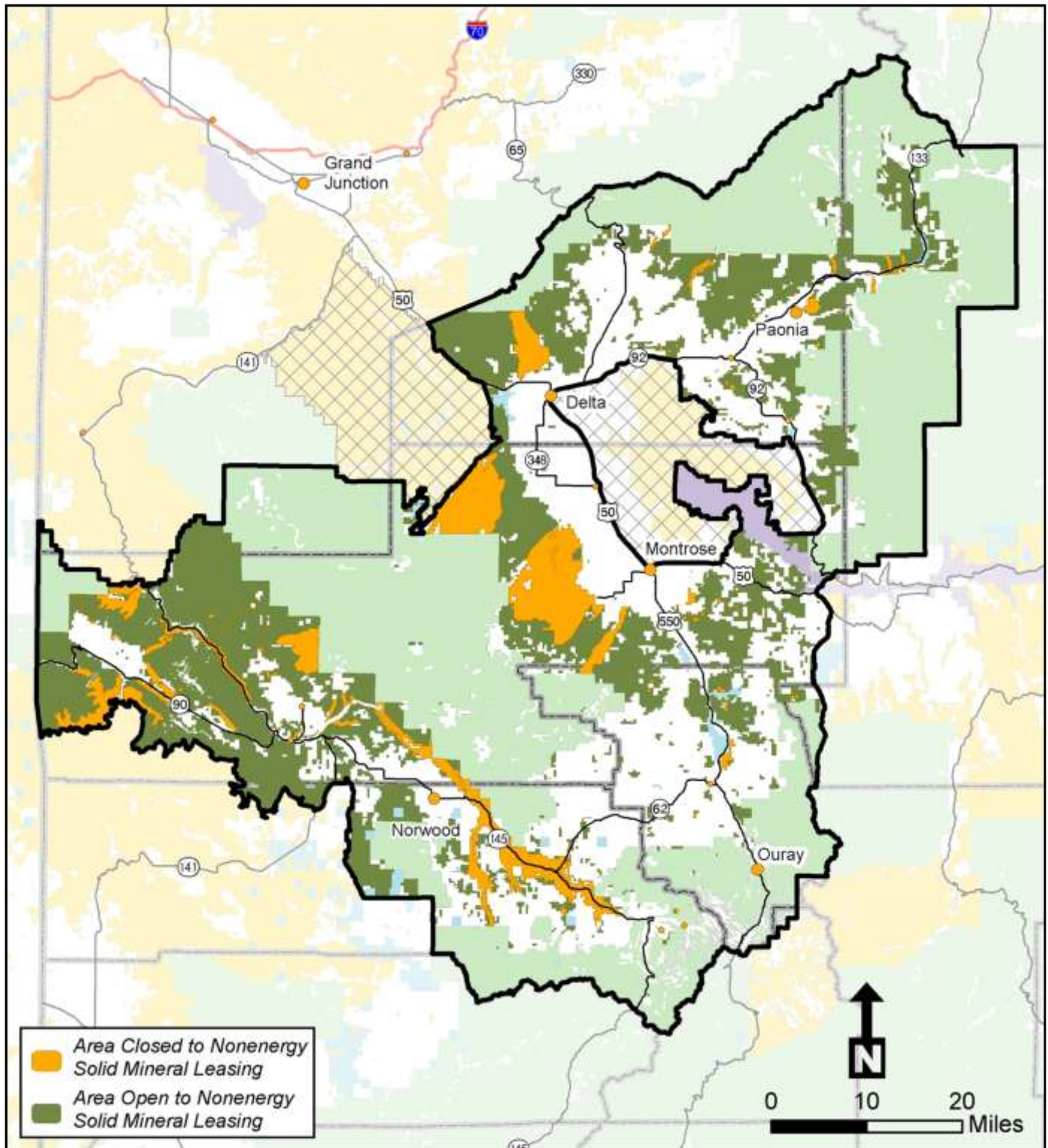


Figure 2-43: Alternative D: Nonenergy Solid Leasable Minerals



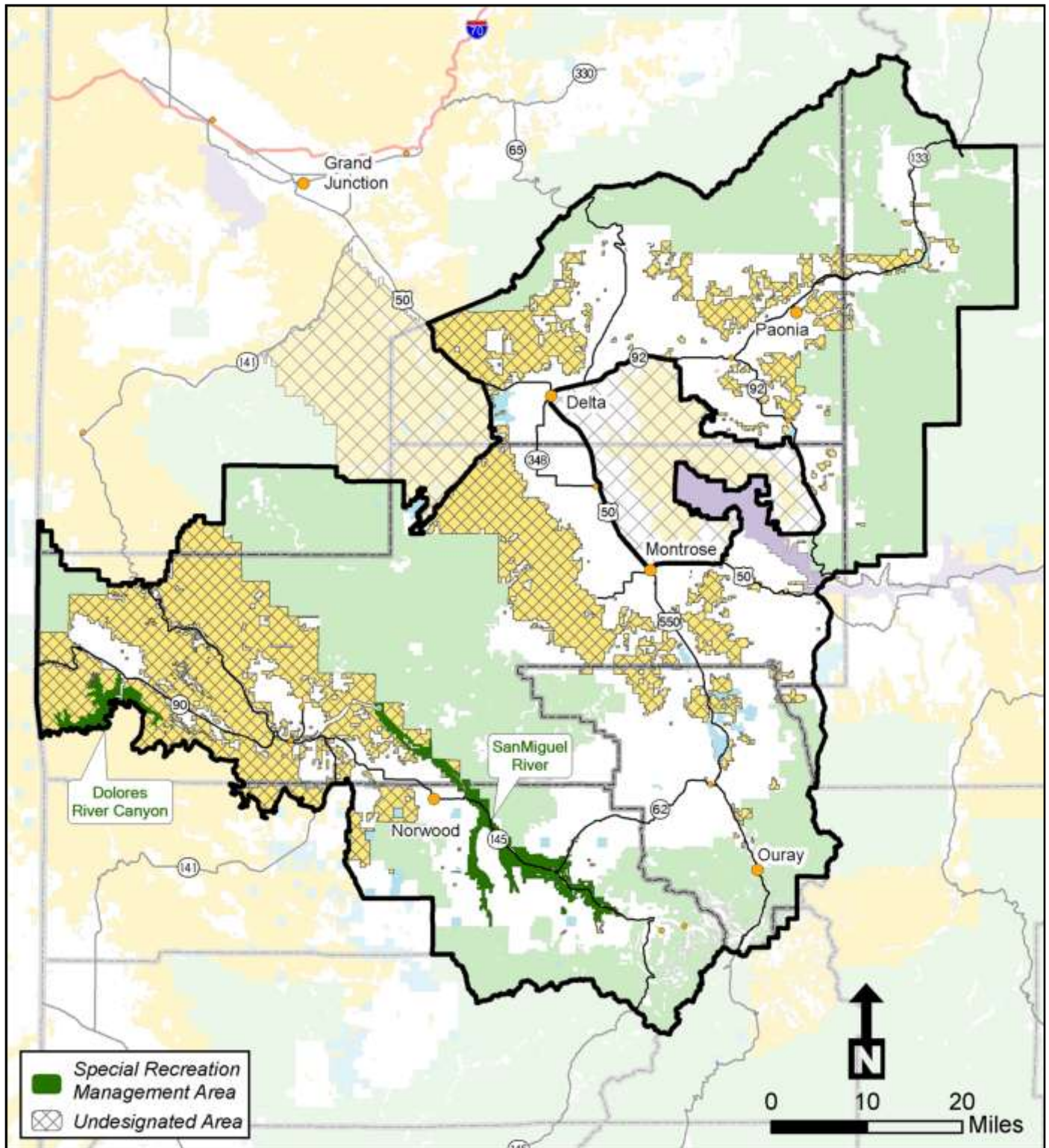


Figure 2-44: Alternative A: Recreation Management Areas

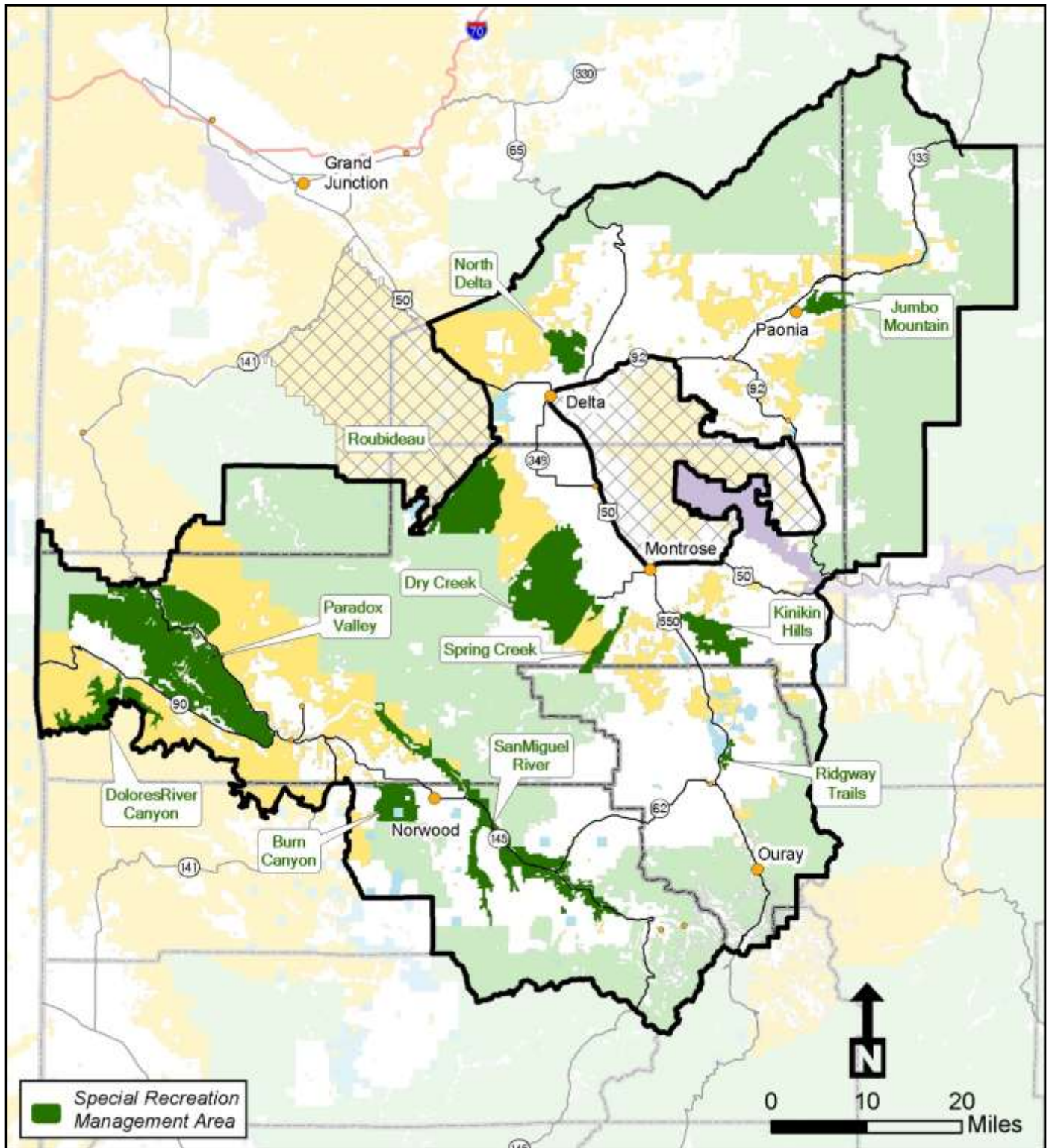


Figure 2-45: Alternative B: Recreation Management Areas



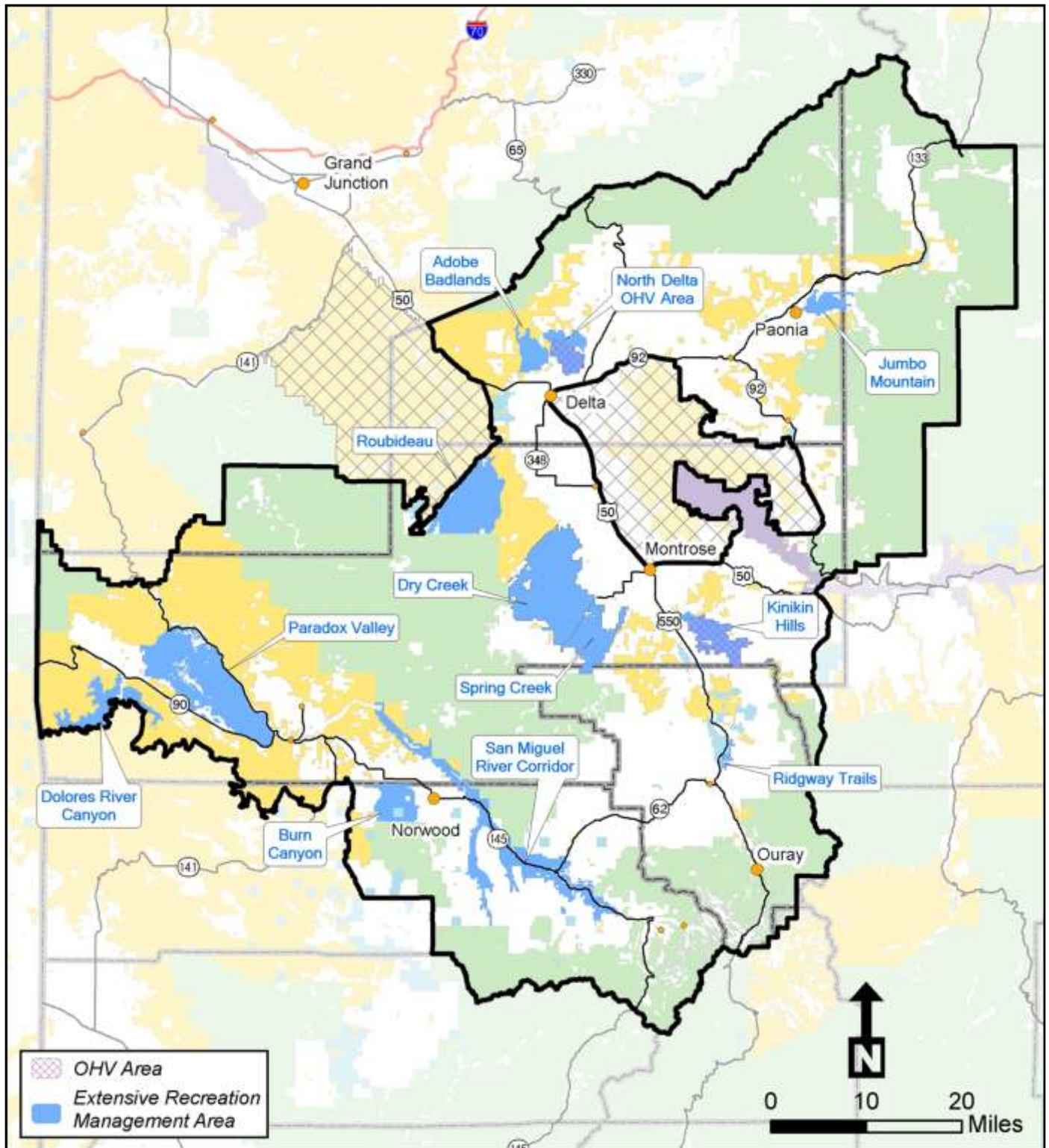


Figure 2-46: Alternative C: Recreation Management Areas

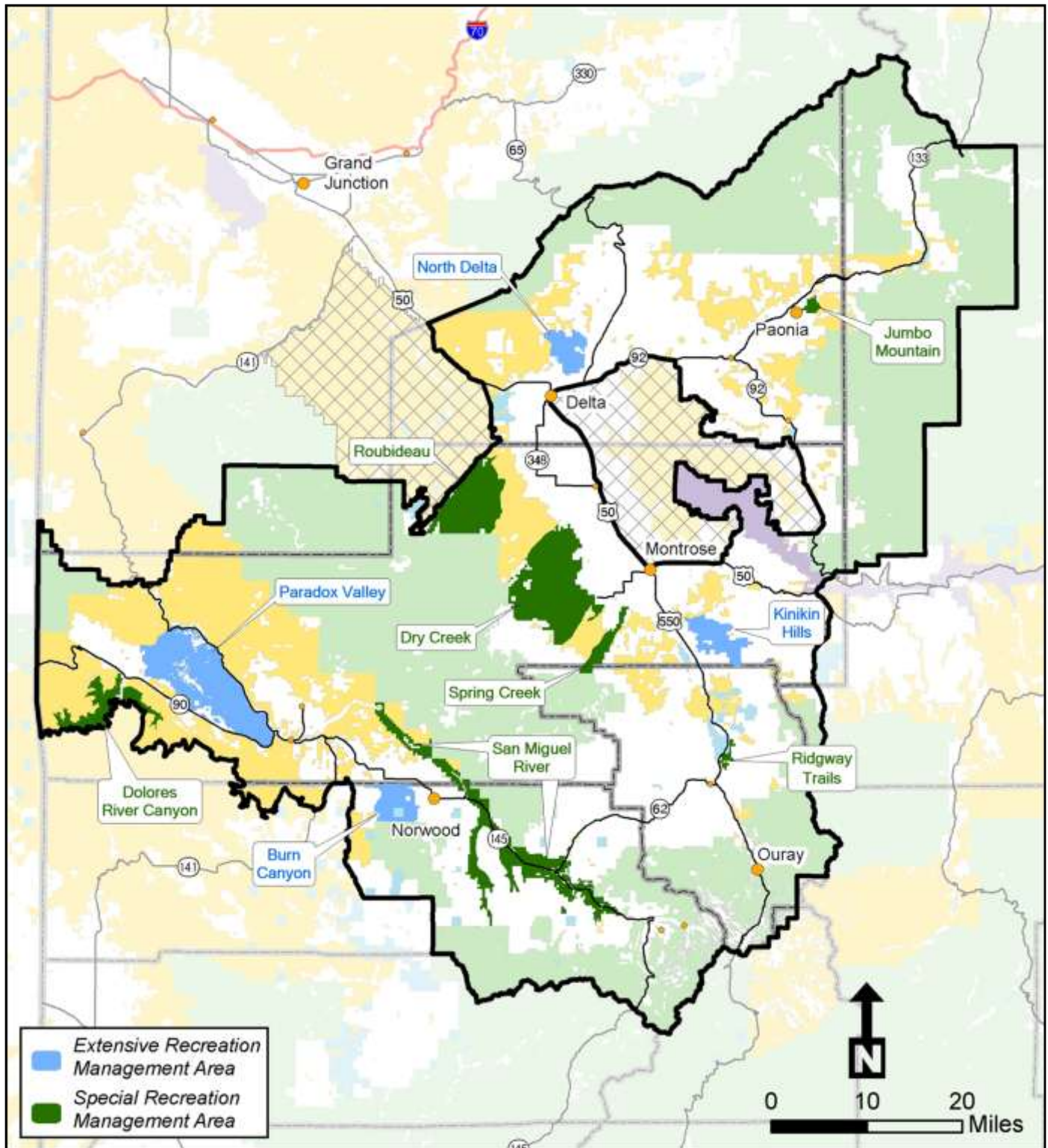


Figure 2-47: Alternative D: Recreation Management Areas



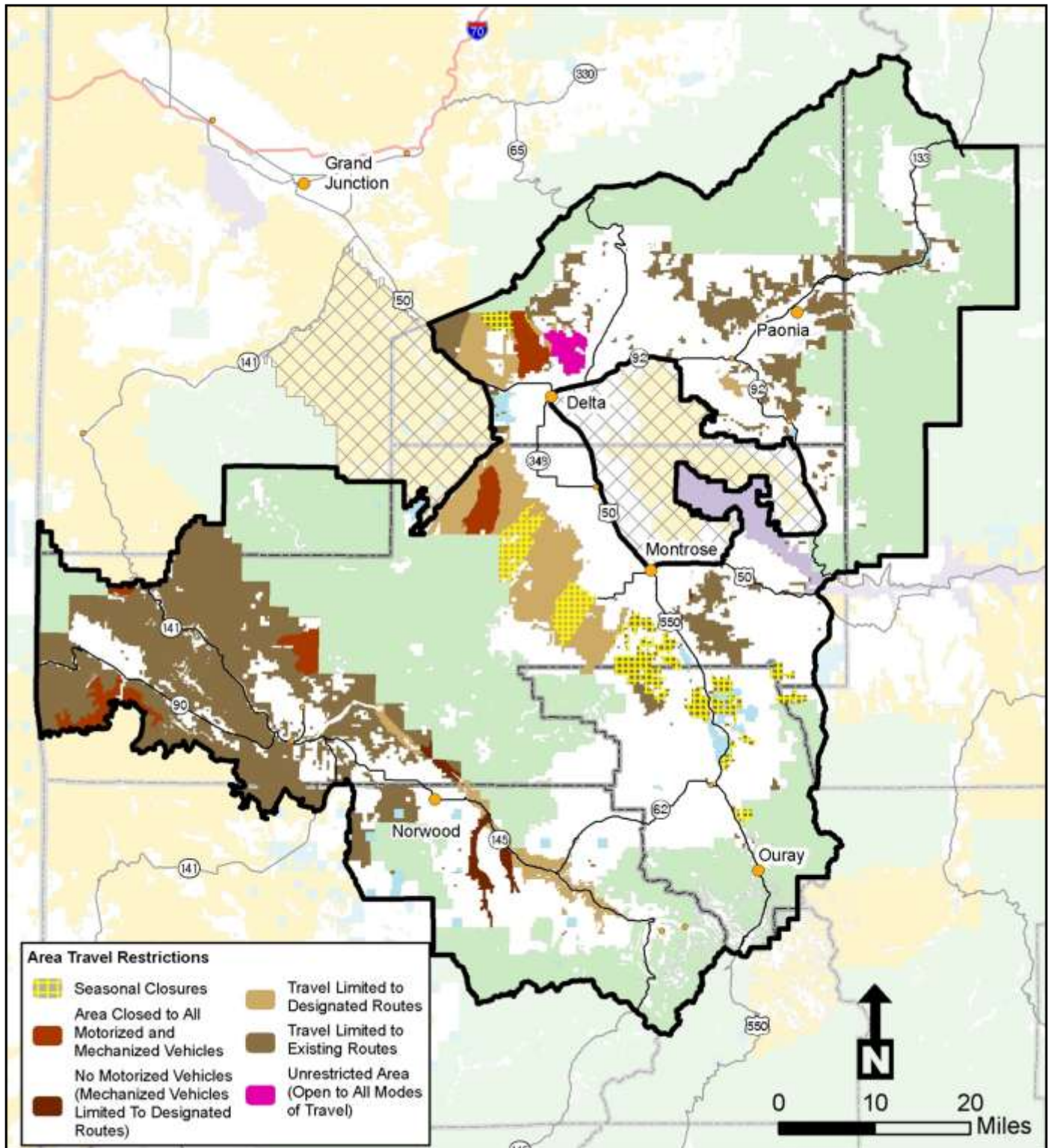


Figure 2-48: Alternative A: Comprehensive Travel and Transportation Management

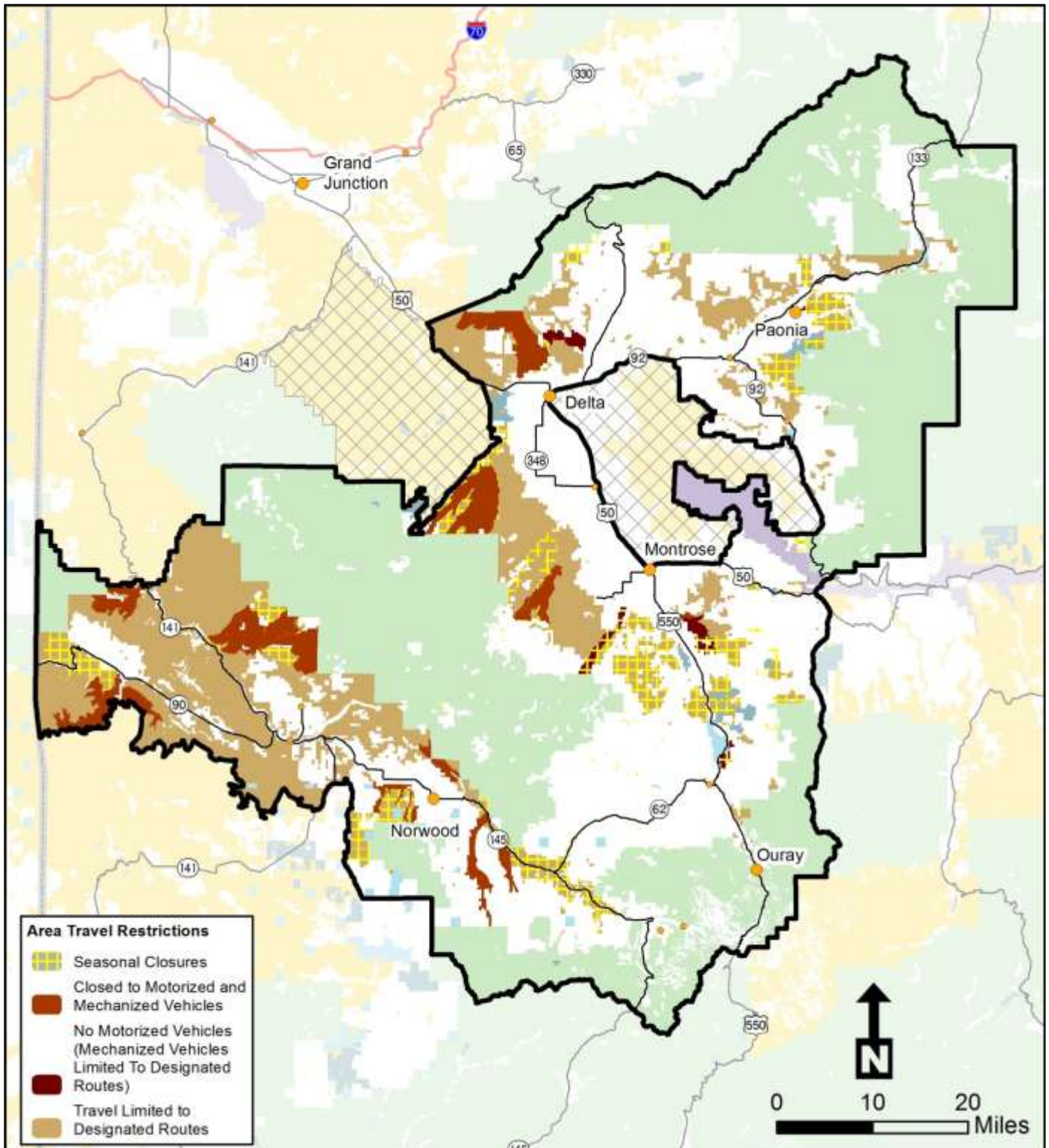


Figure 2-49: Alternative B: Comprehensive Travel and Transportation Management



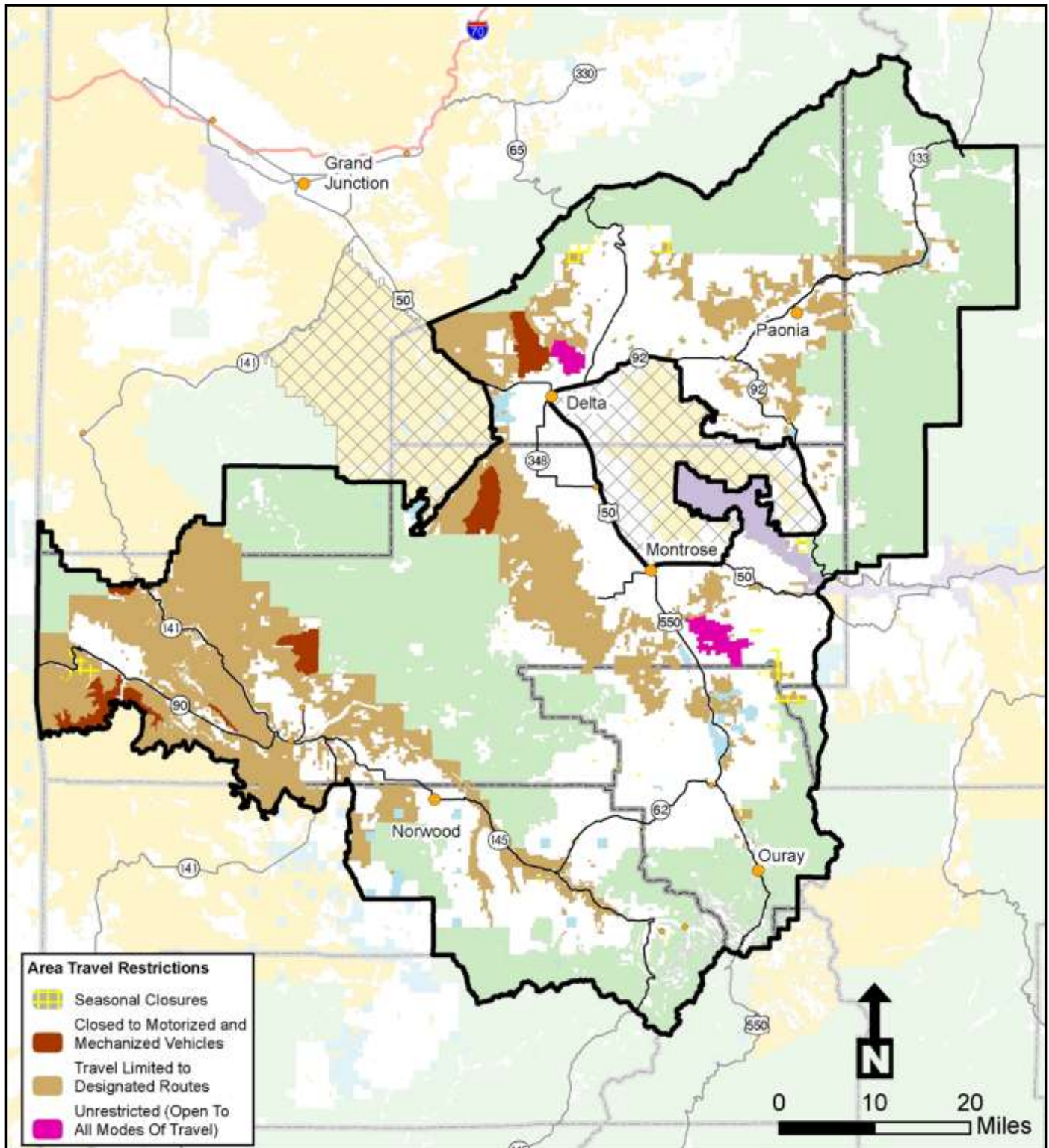


Figure 2-50: Alternative C: Comprehensive Travel and Transportation Management

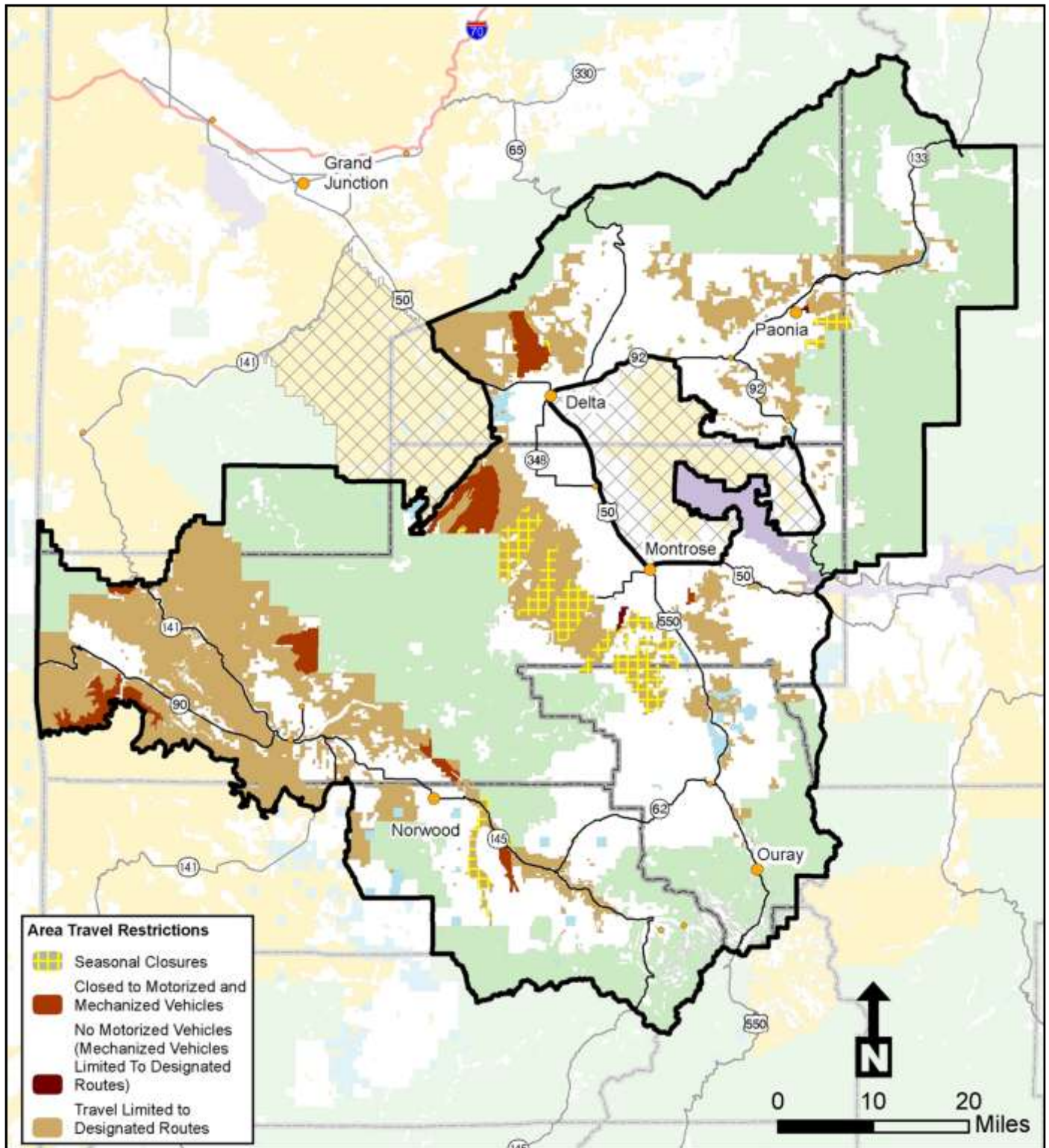


Figure 2-51: Alternative D: Comprehensive Travel and Transportation Management



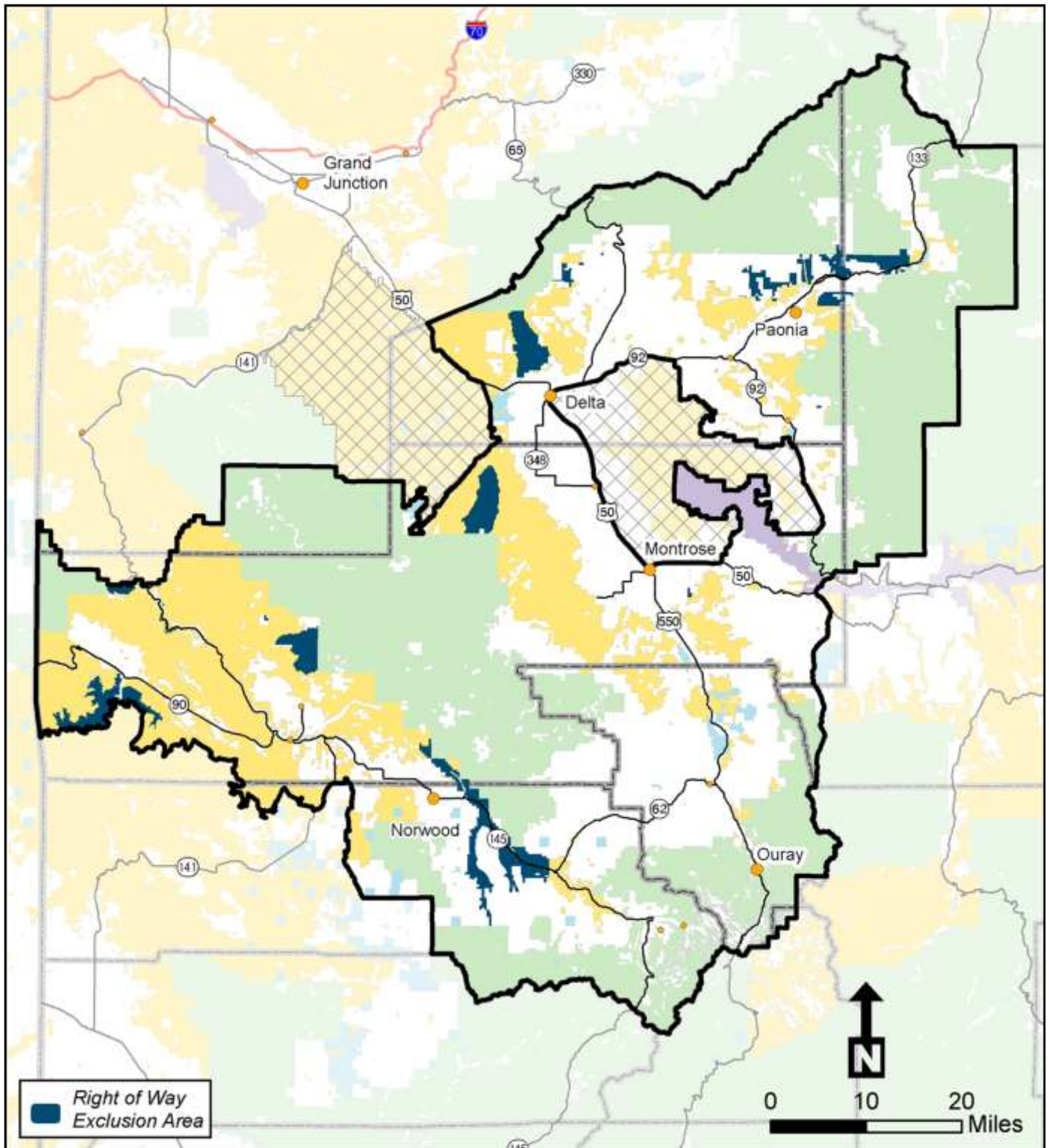


Figure 2-52: Alternative A: Right-of-Way Exclusion and Avoidance Areas

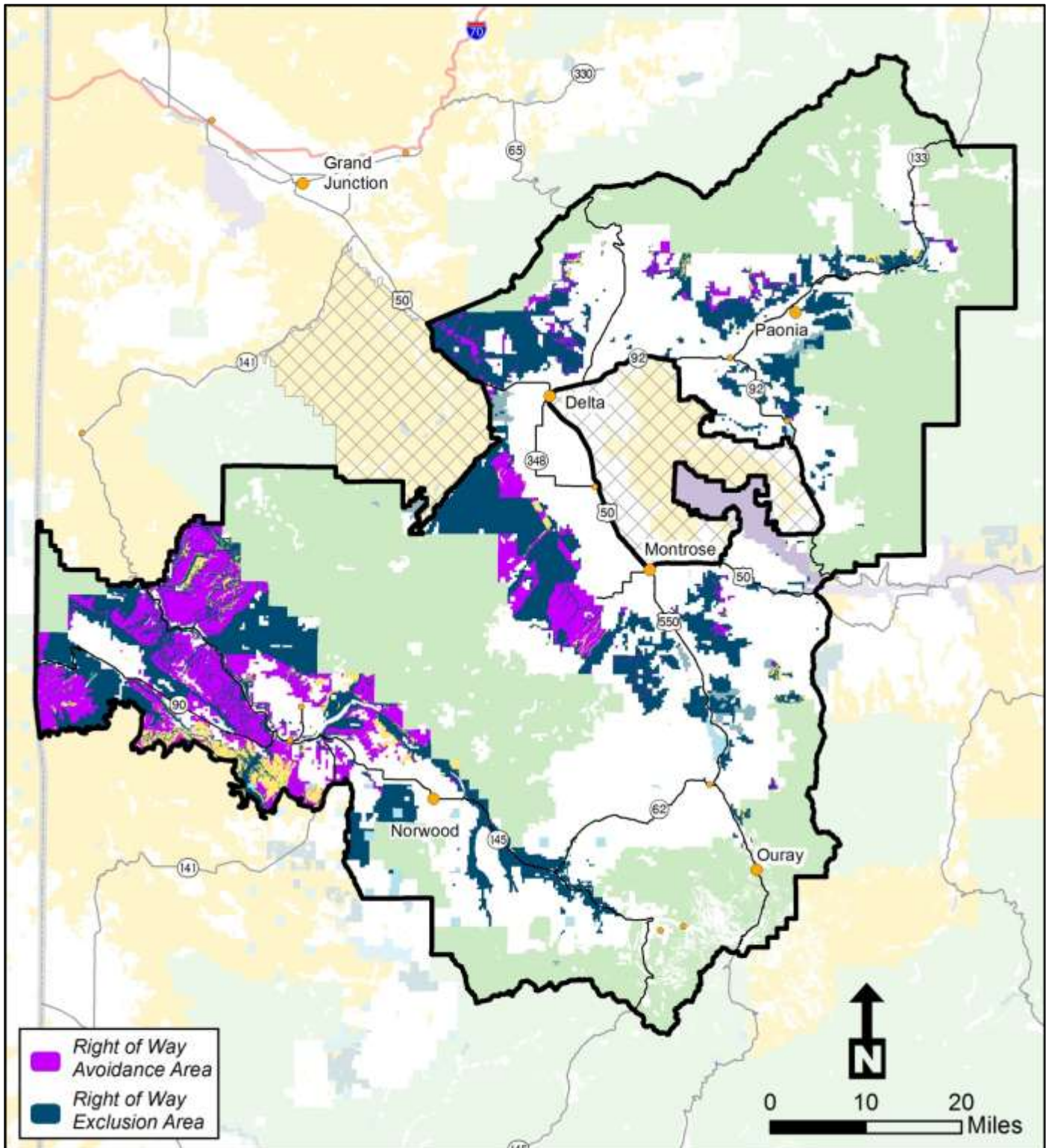


Figure 2-53: Alternative B: Right-of-Way Exclusion and Avoidance Areas



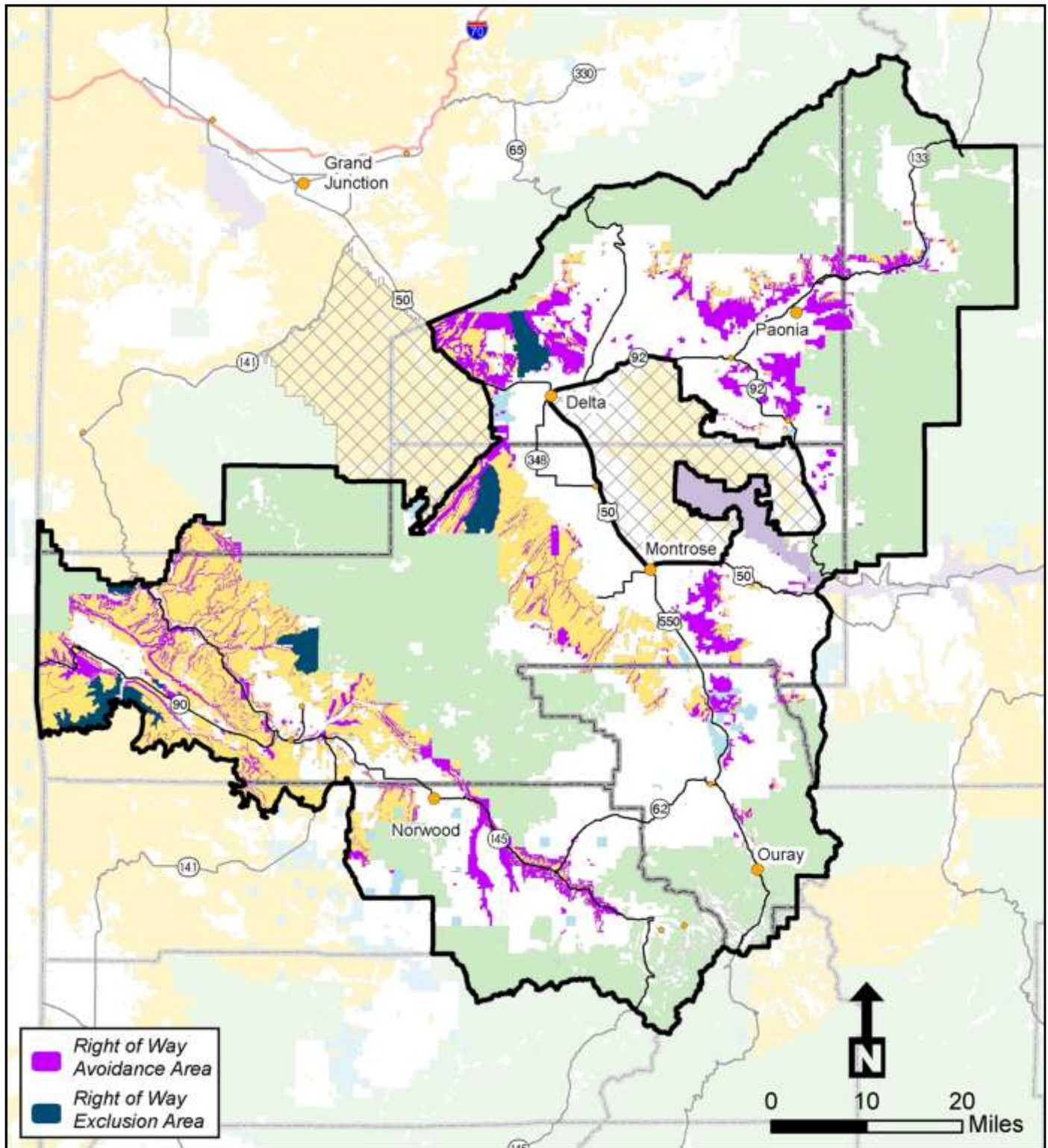


Figure 2-54: Alternative C: Right-of-Way Exclusion and Avoidance Areas

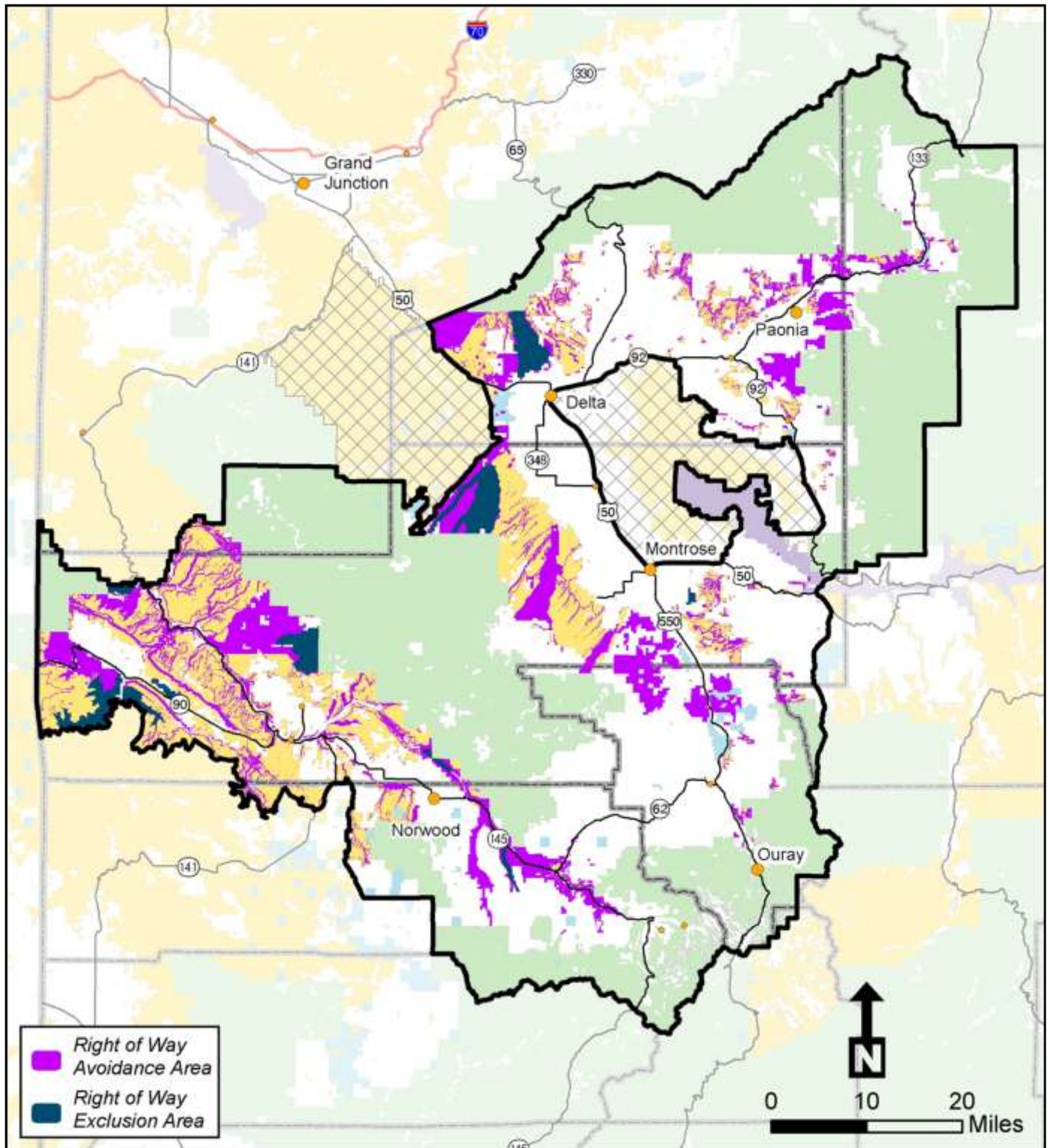


Figure 2-55: Alternative D: Right-of-Way Exclusion and Avoidance Areas



*Uncompahgre Draft Resource Management Plan Revision and Environmental Impact Statement*

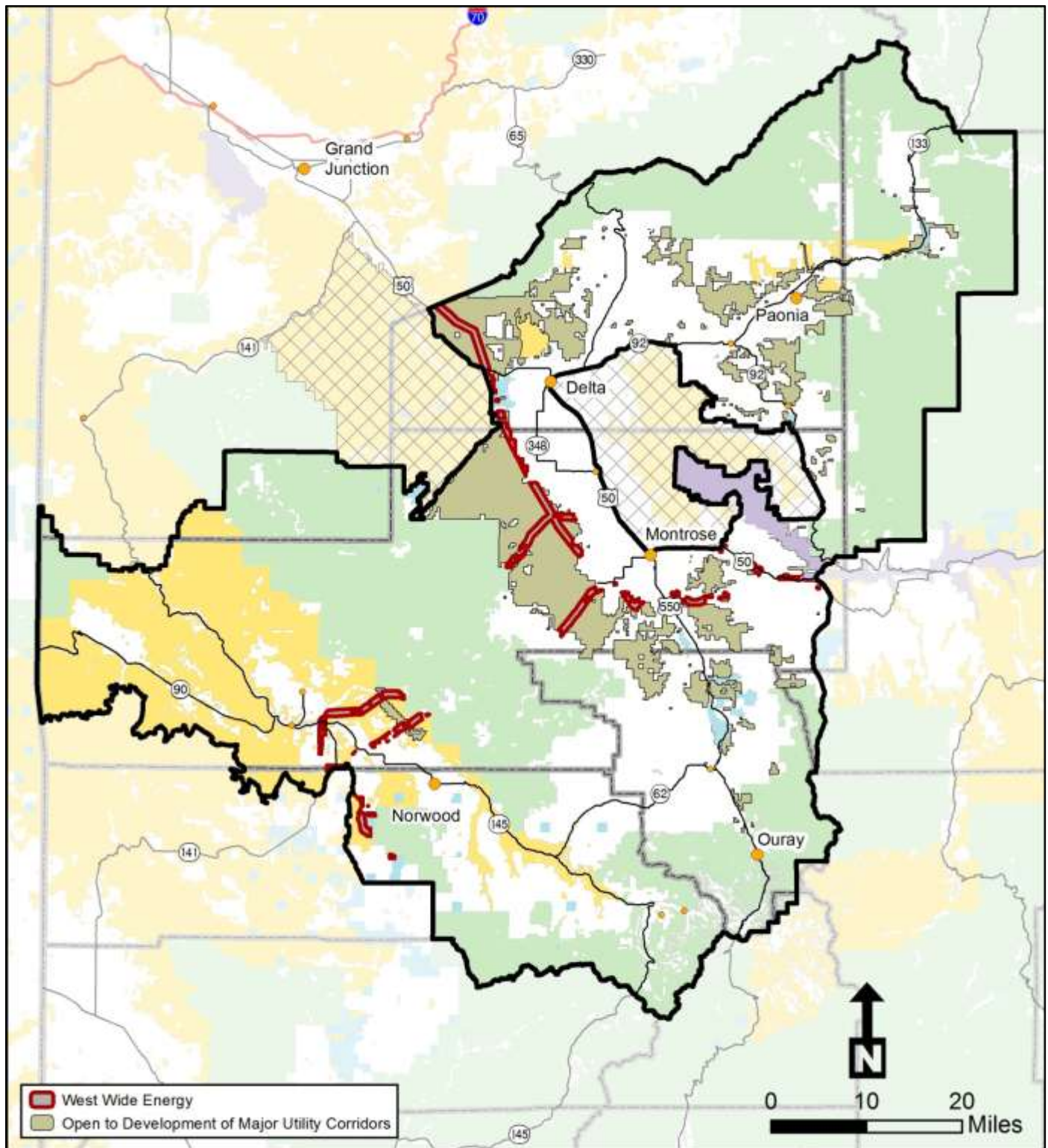


Figure 2-57: Alternatives B and D: Designated Utility Corridors



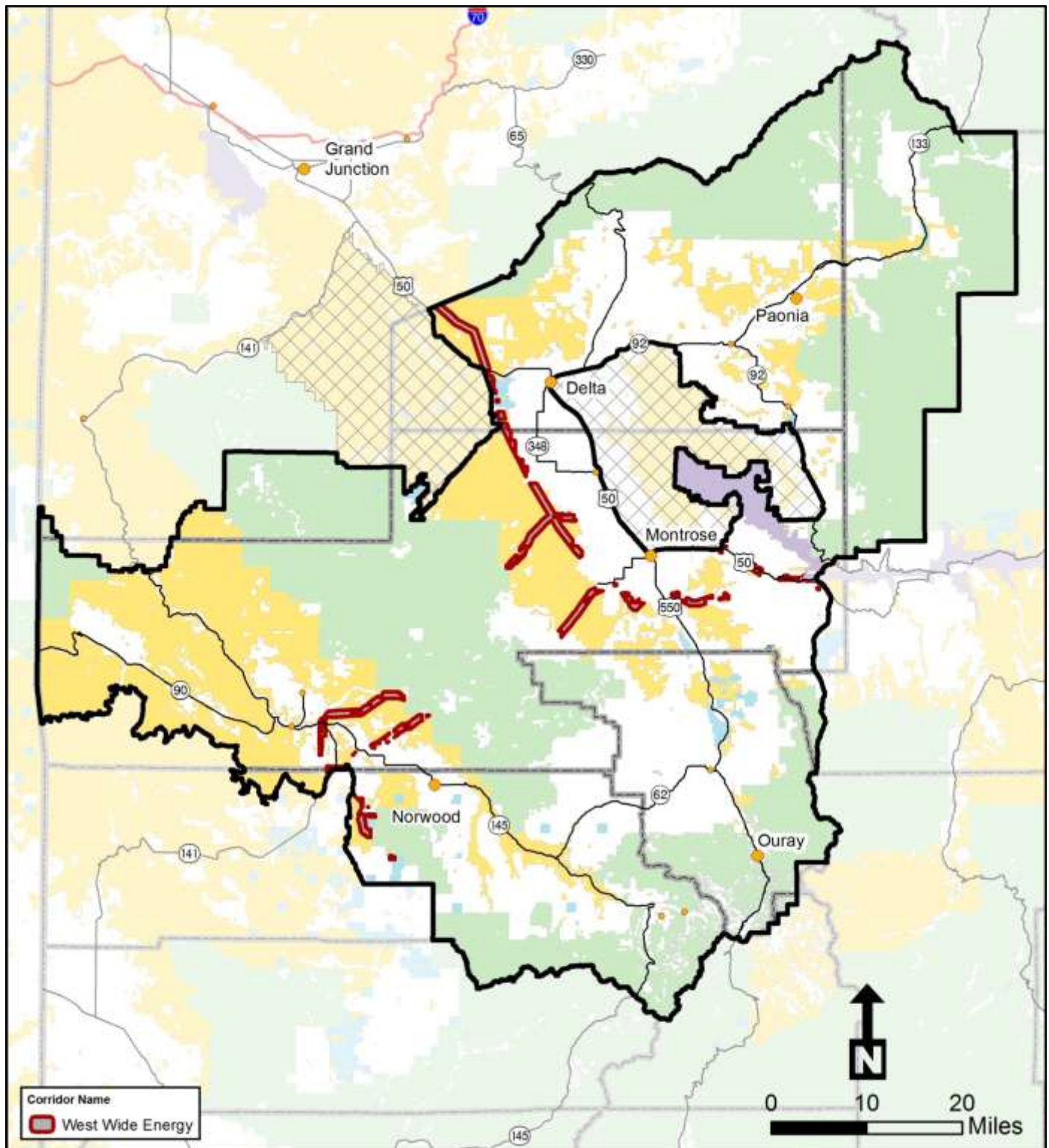


Figure 2-58: Alternative C: Designated Utility Corridors

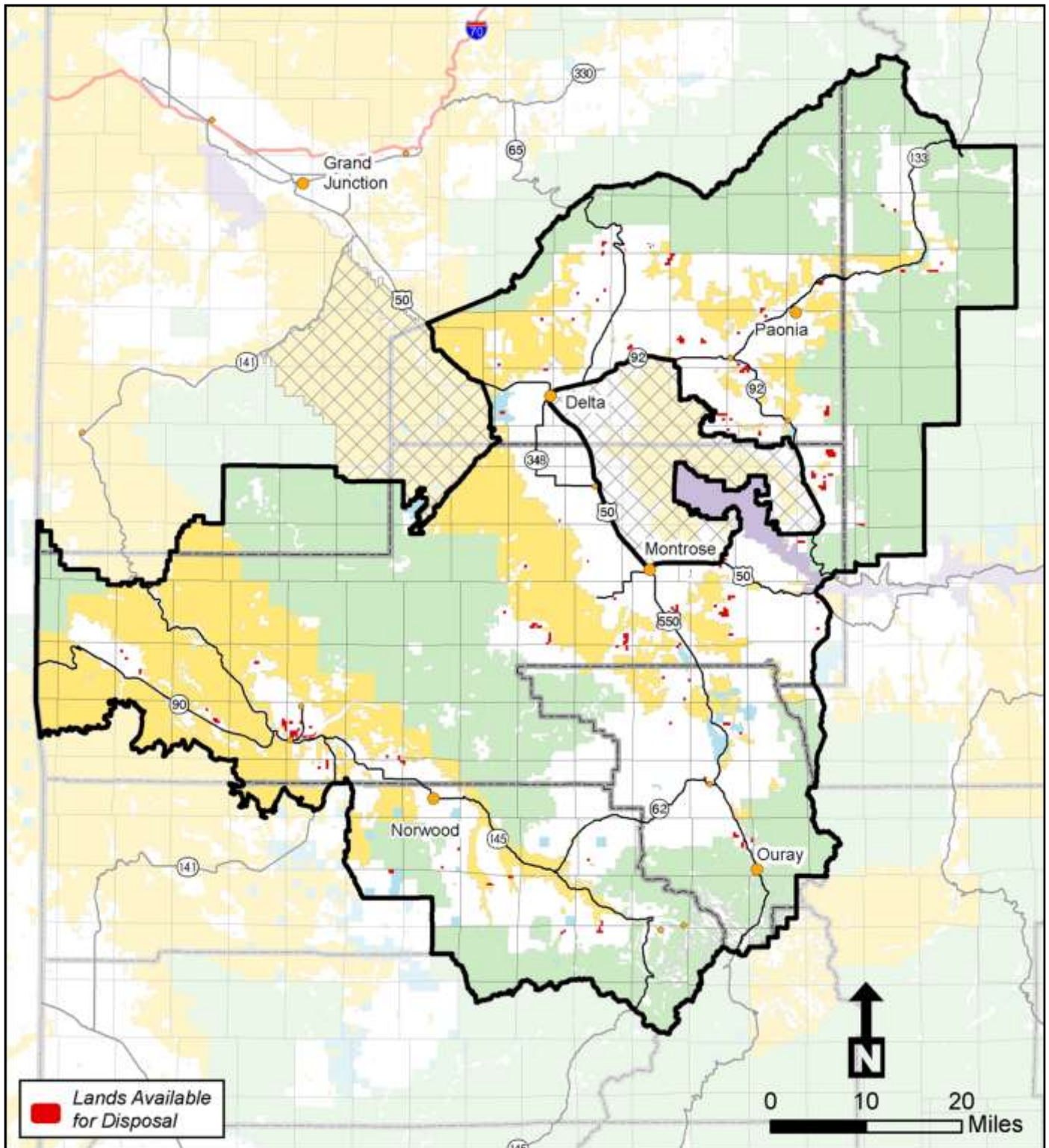


Figure 2-59: Alternative A: Lands Identified for Disposal



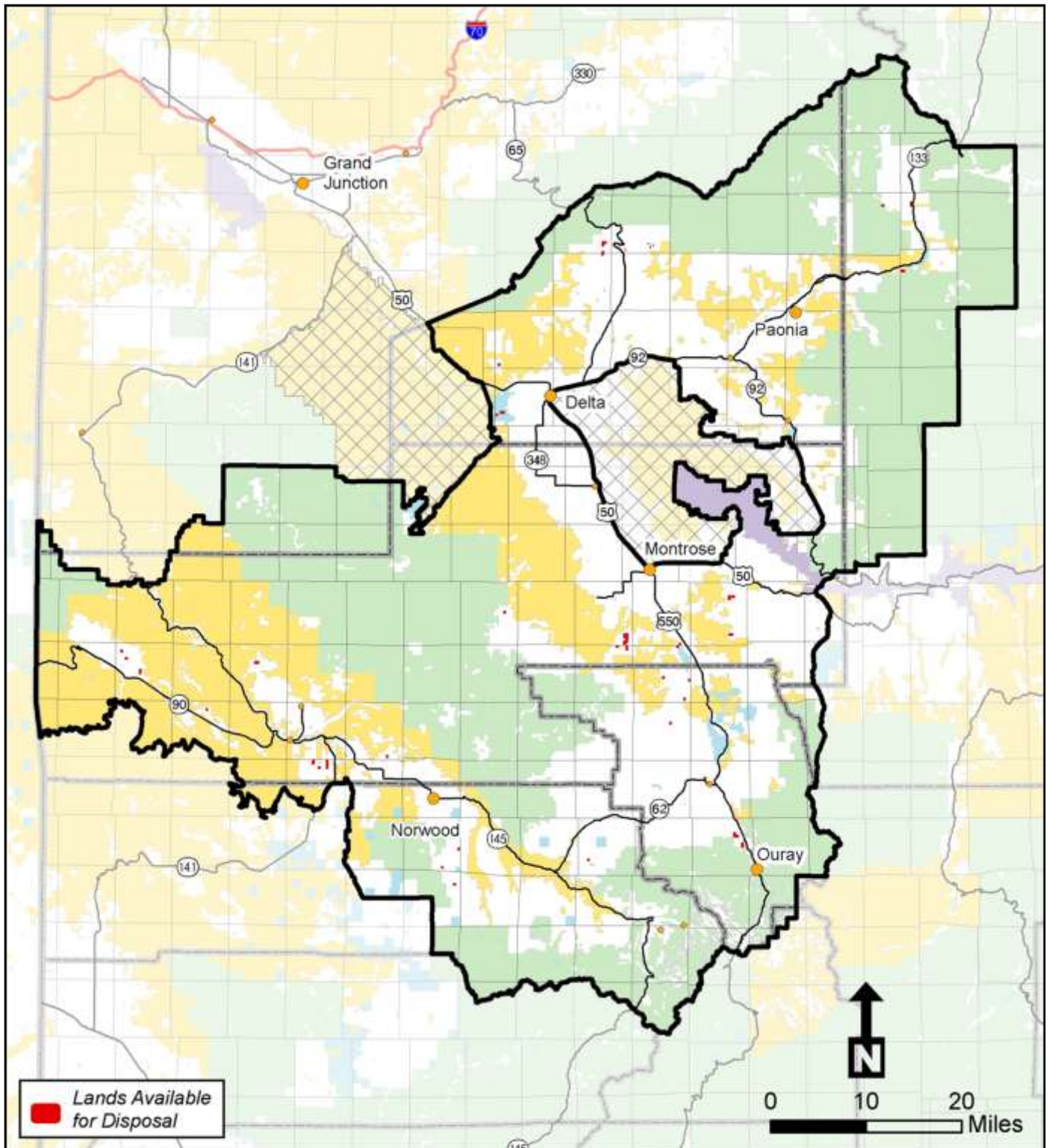


Figure 2-60: Alternative B: Lands Identified for Disposal

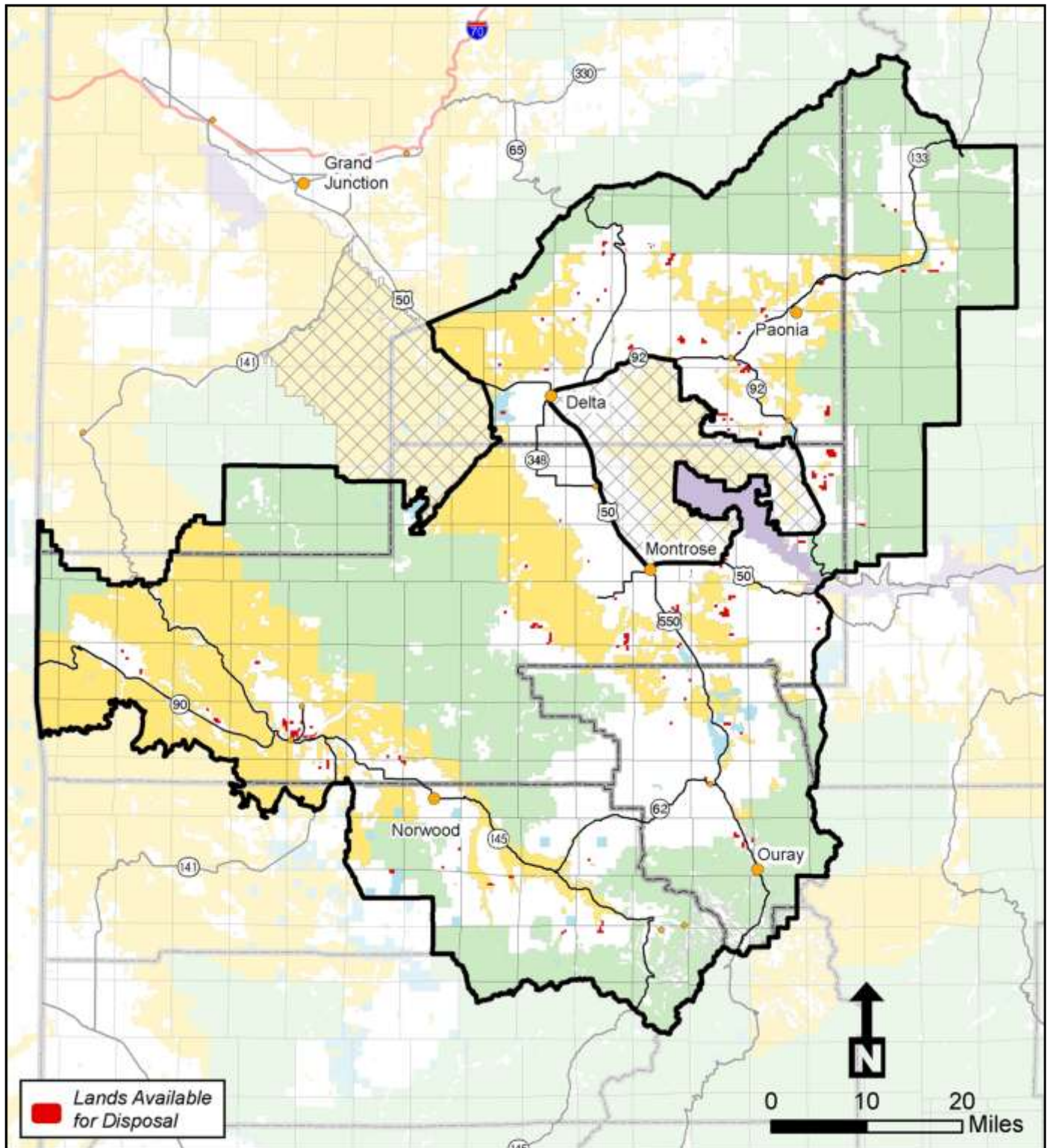


Figure 2-61: Alternative C: Lands Identified for Disposal



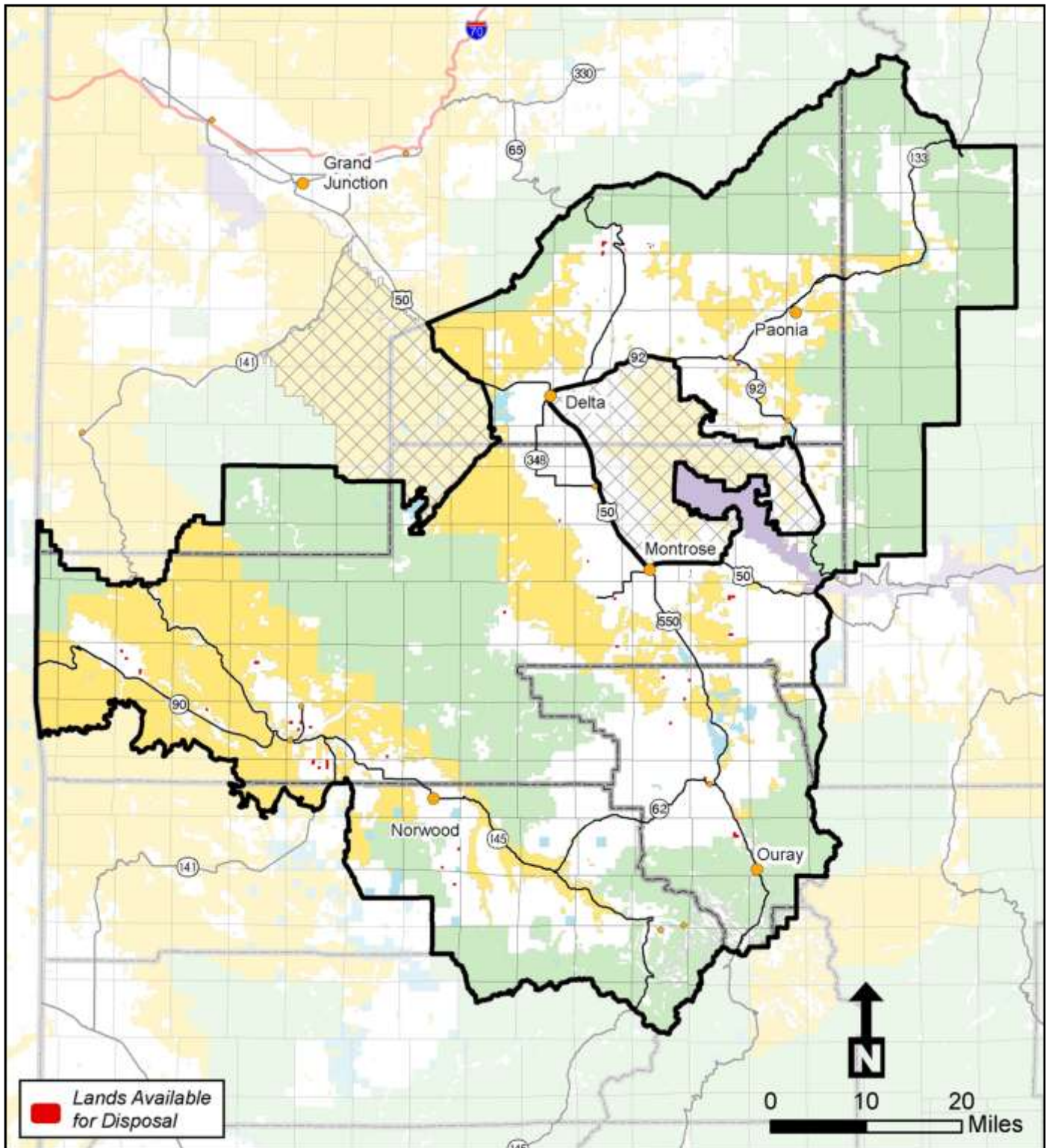


Figure 2-62: Alternative D: Lands Identified for Disposal

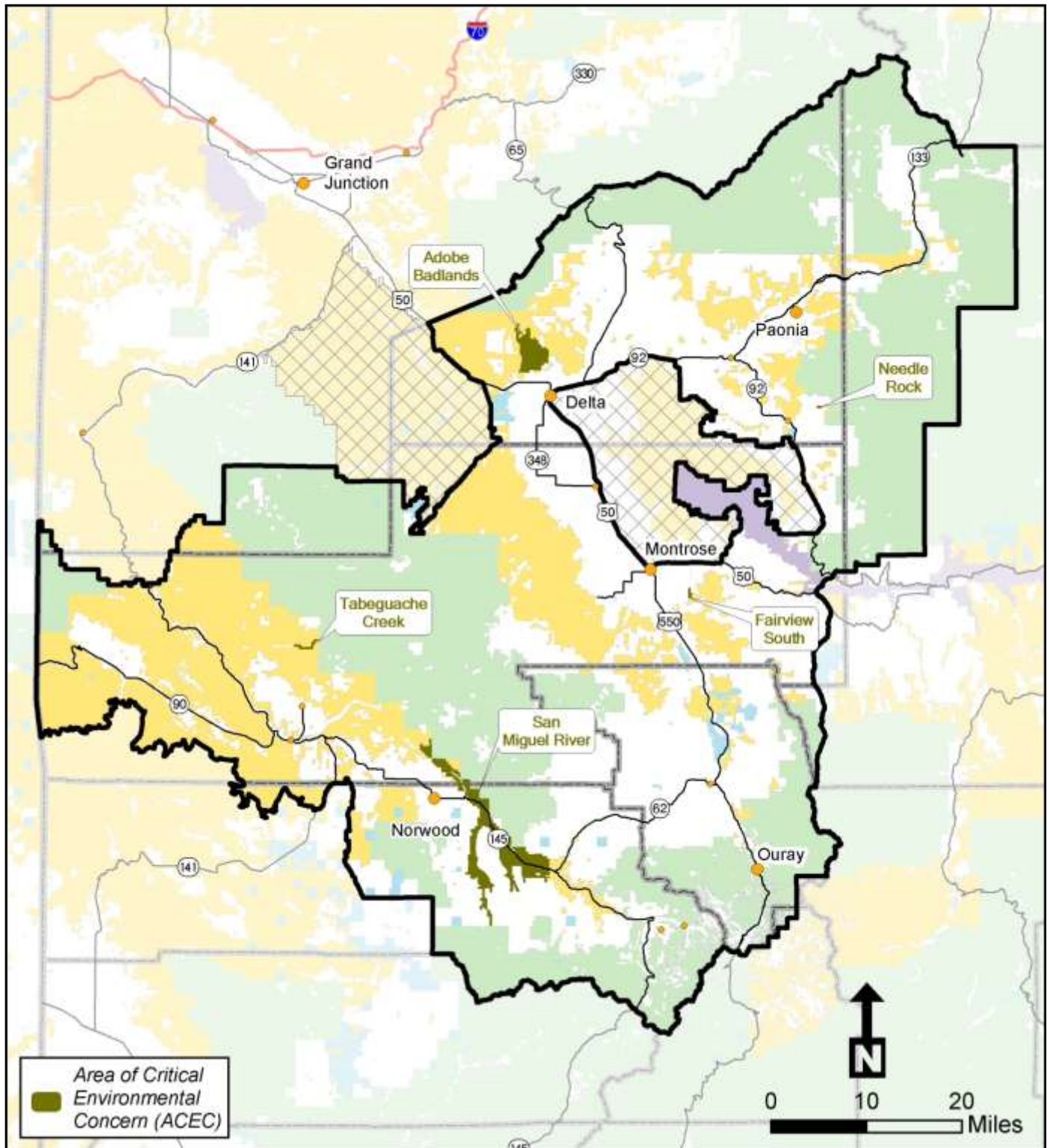


Figure 2-63: Alternative A: Areas of Critical Environmental Concern



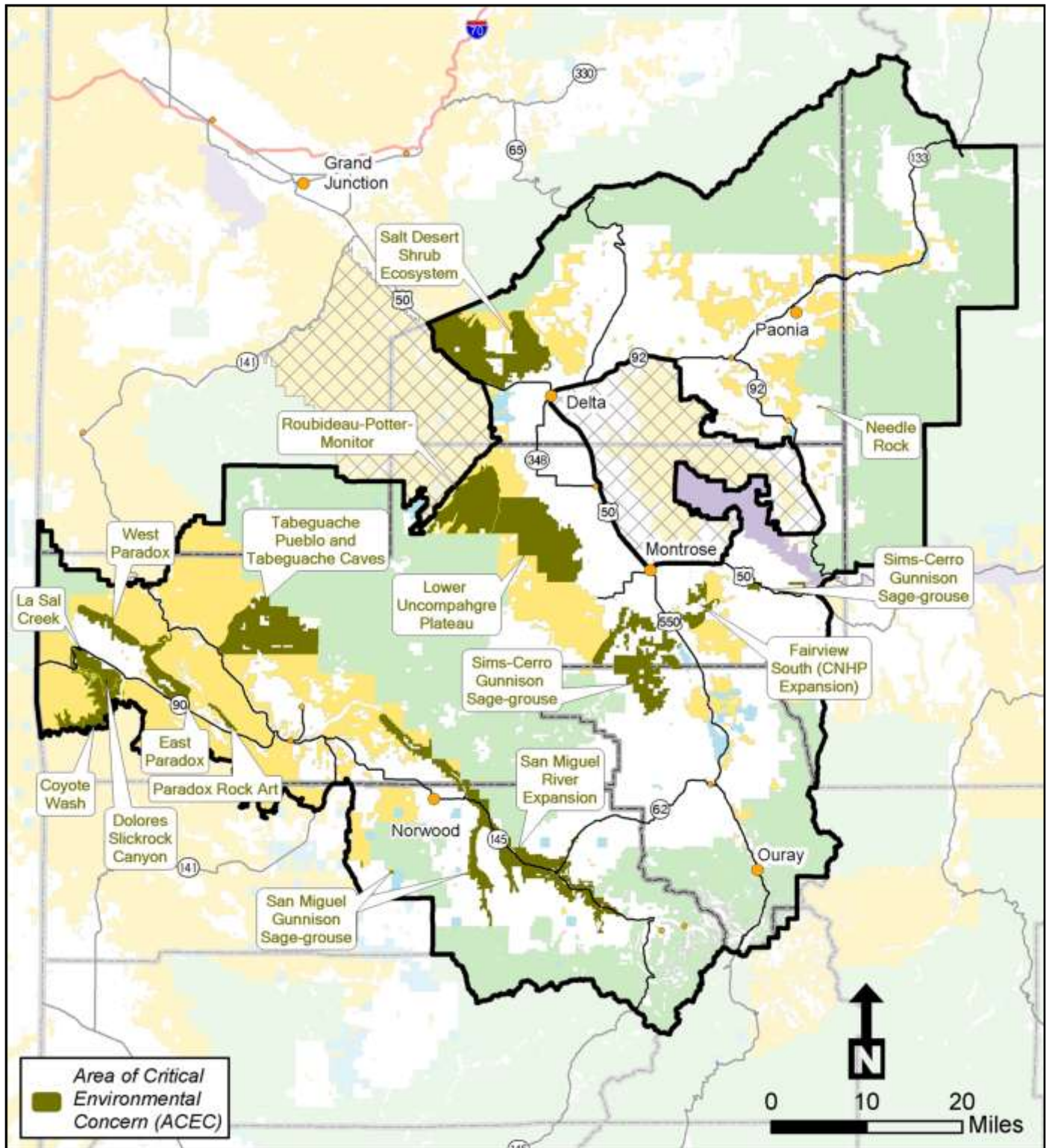


Figure 2-64: Alternative B: Areas of Critical Environmental Concern

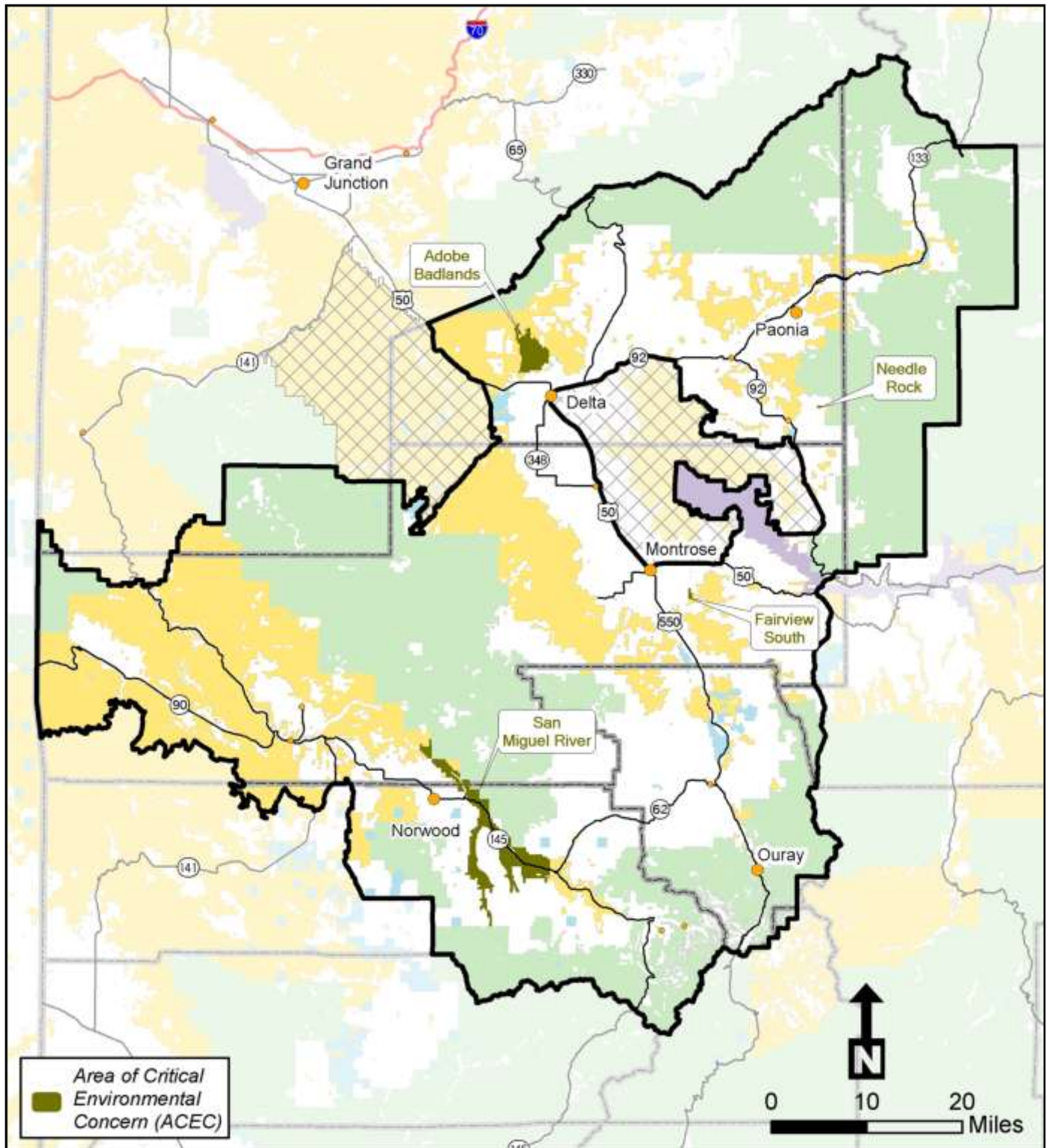


Figure 2-65: Alternative C: Areas of Critical Environmental Concern



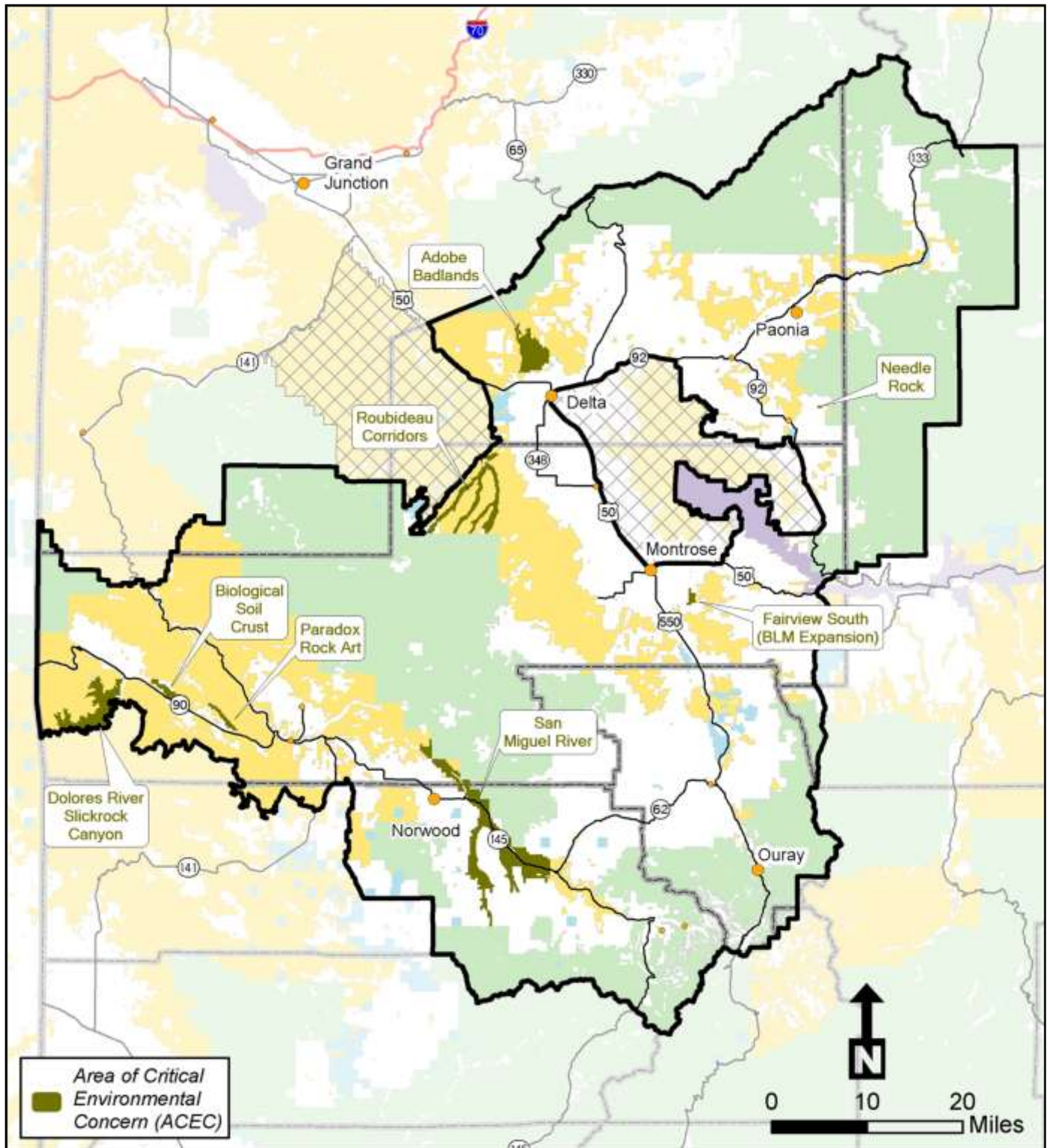


Figure 2-66: Alternative D: Areas of Critical Environmental Concern

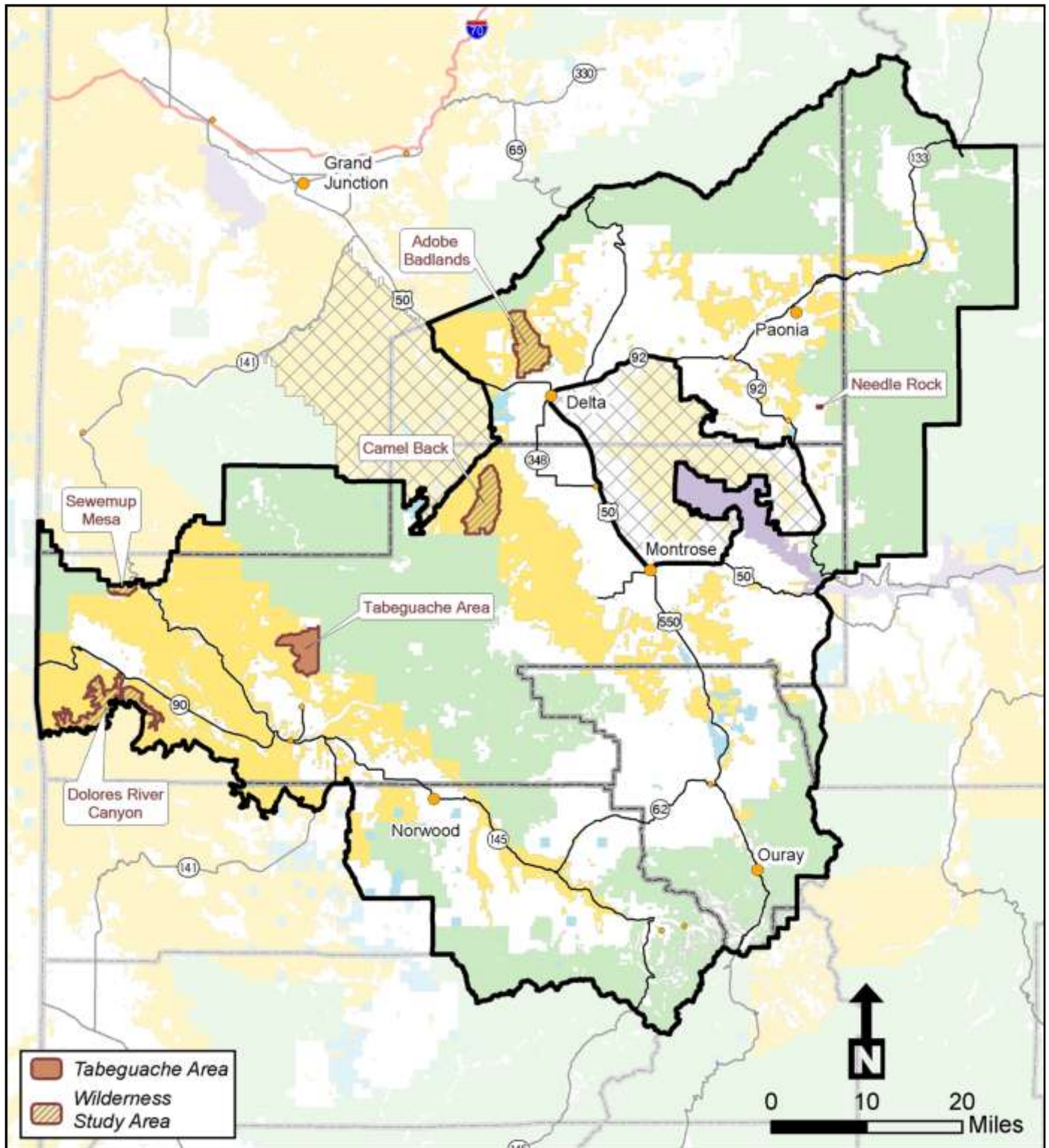


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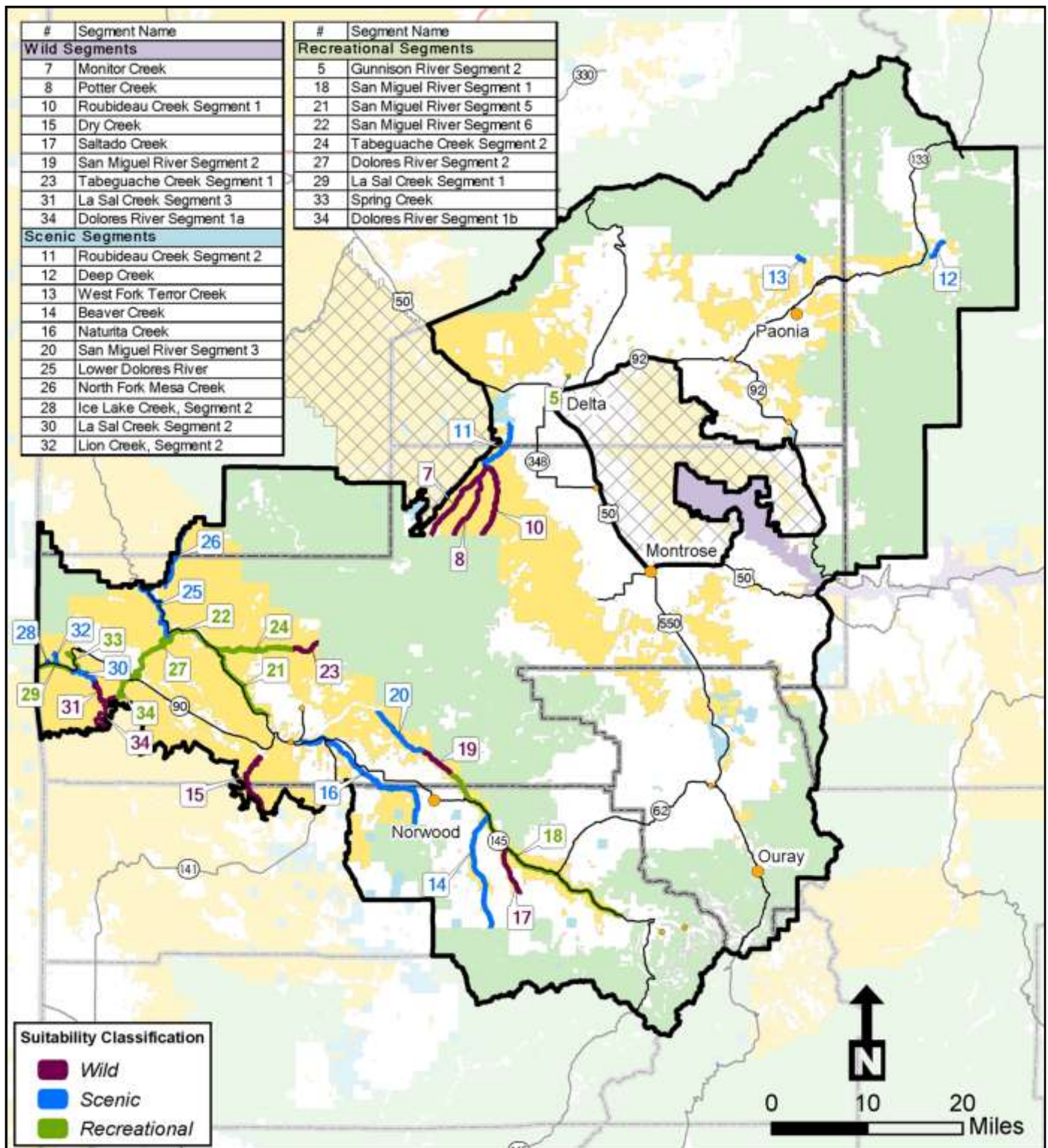


Figure 2-68: Alternatives A and B: Segments Eligible (Alternative A) or Suitable (Alternative B) for Inclusion in the National Wild and Scenic Rivers System

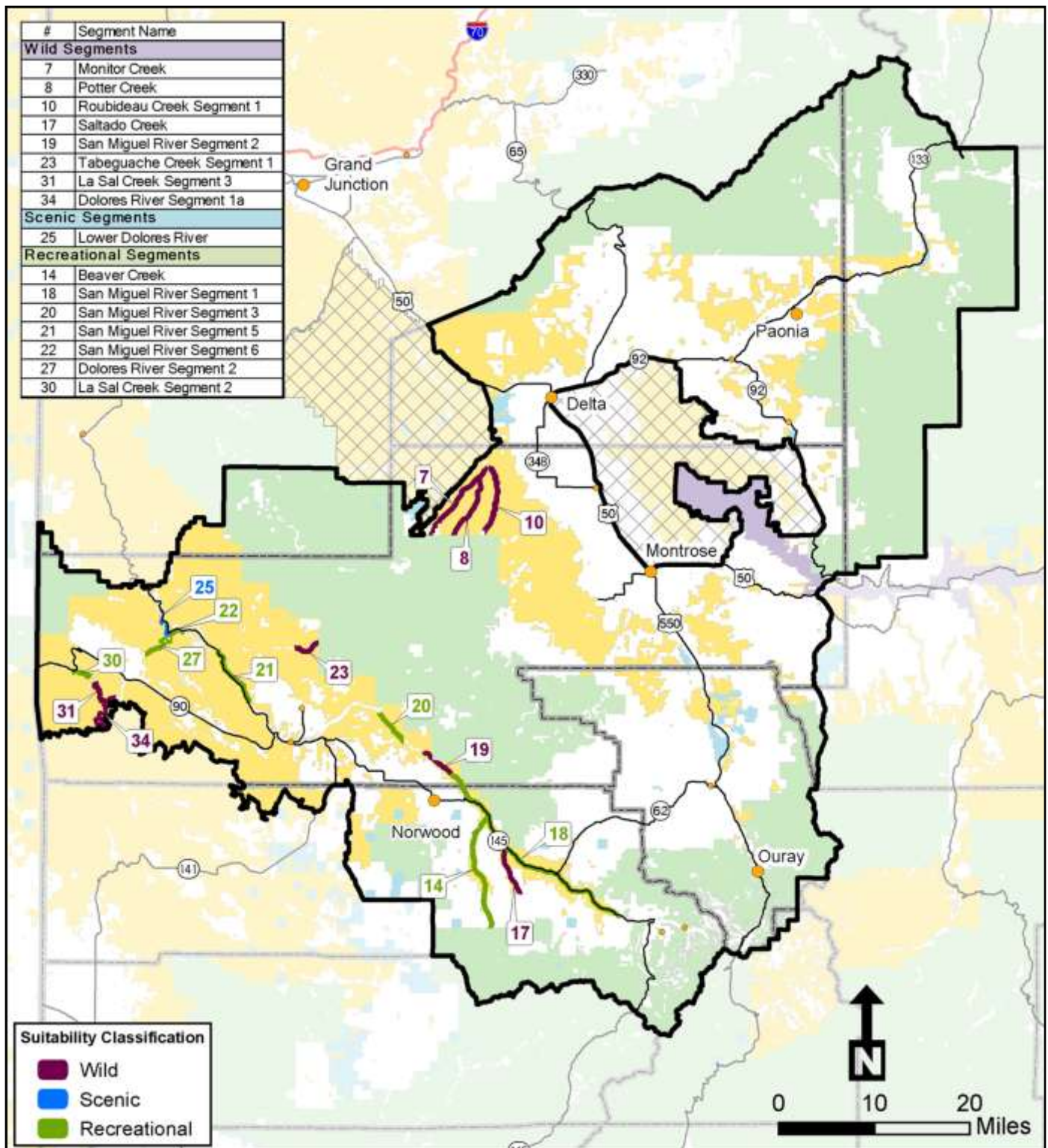


Figure 2-69: Alternative D: Segments Suitable for Inclusion in the National Wild and Scenic Rivers System



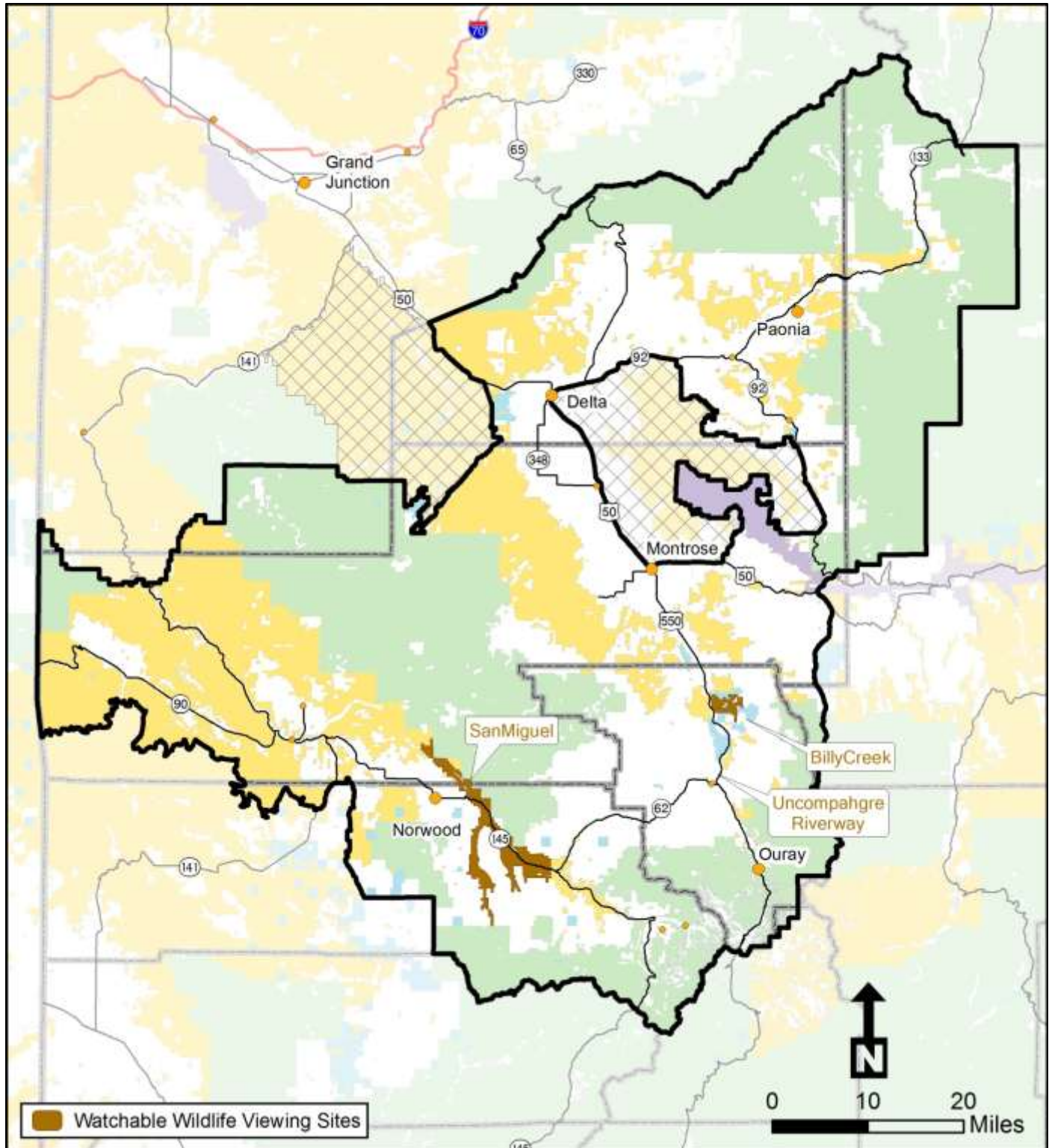


Figure 2-70: Alternative B: Watchable Wildlife Viewing Sites

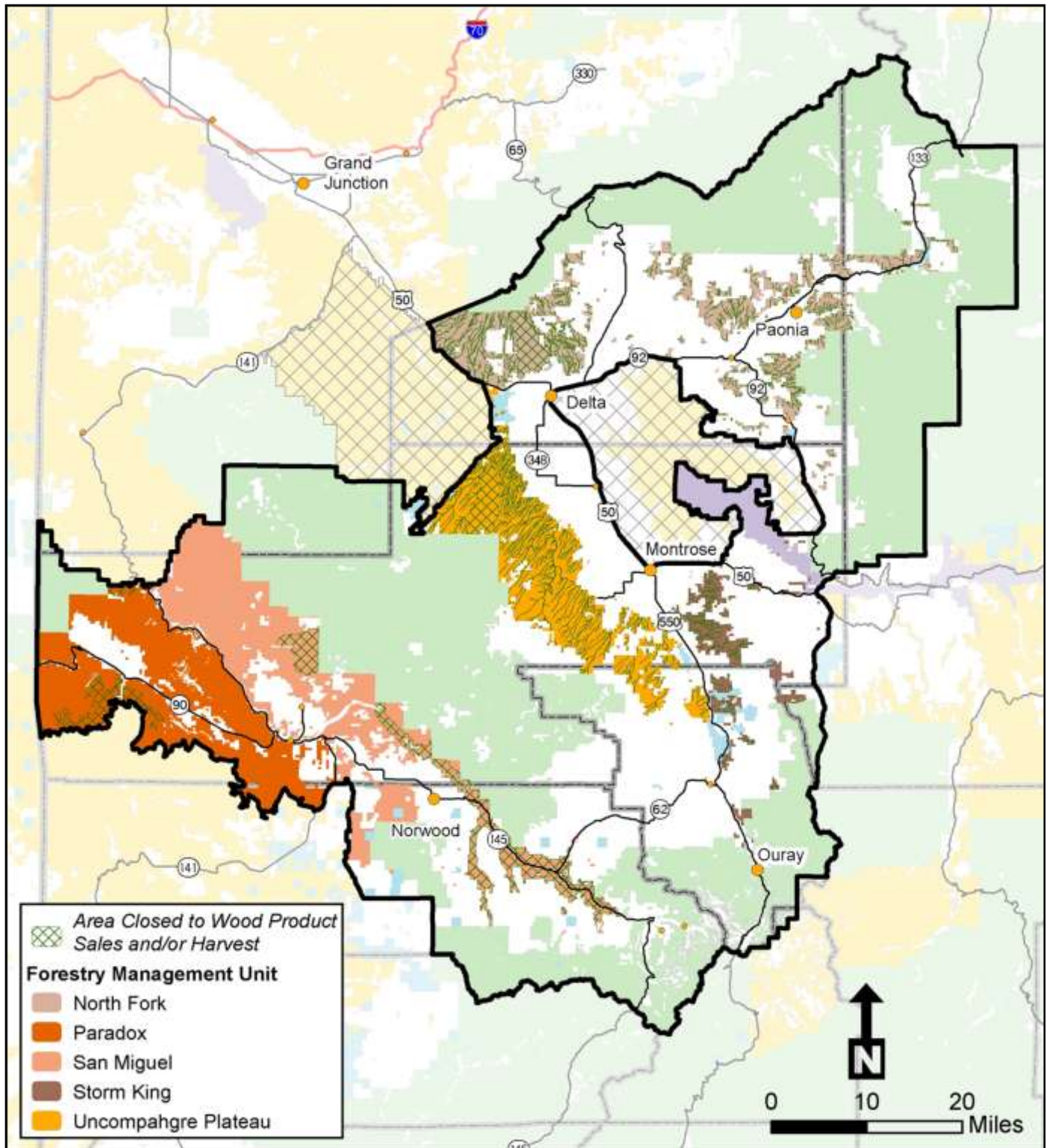


Figure 2-71: Alternative A: Forest Management



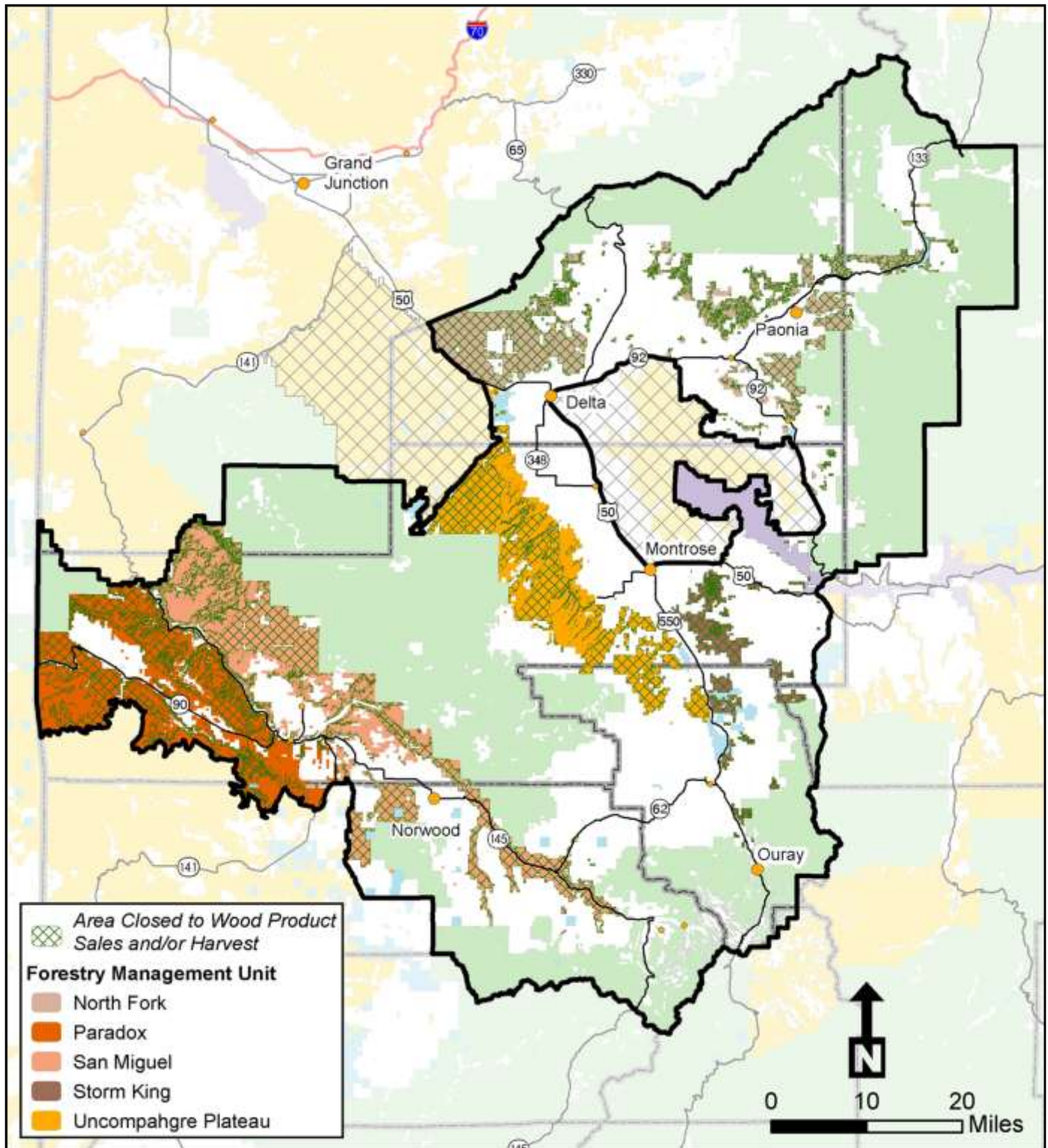


Figure 2-72: Alternative B: Forest Management

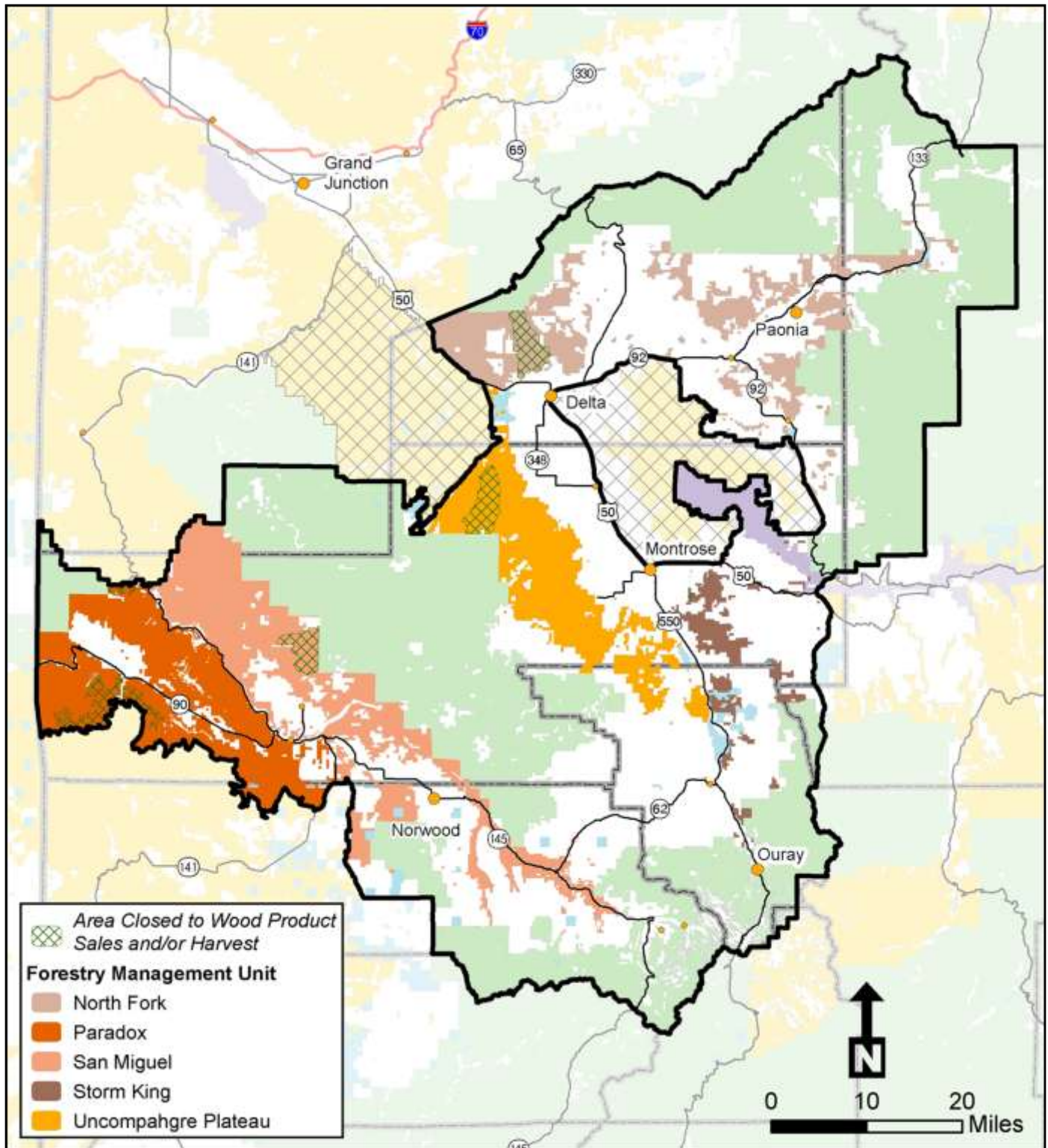


Figure 2-73: Alternative C: Forest Management



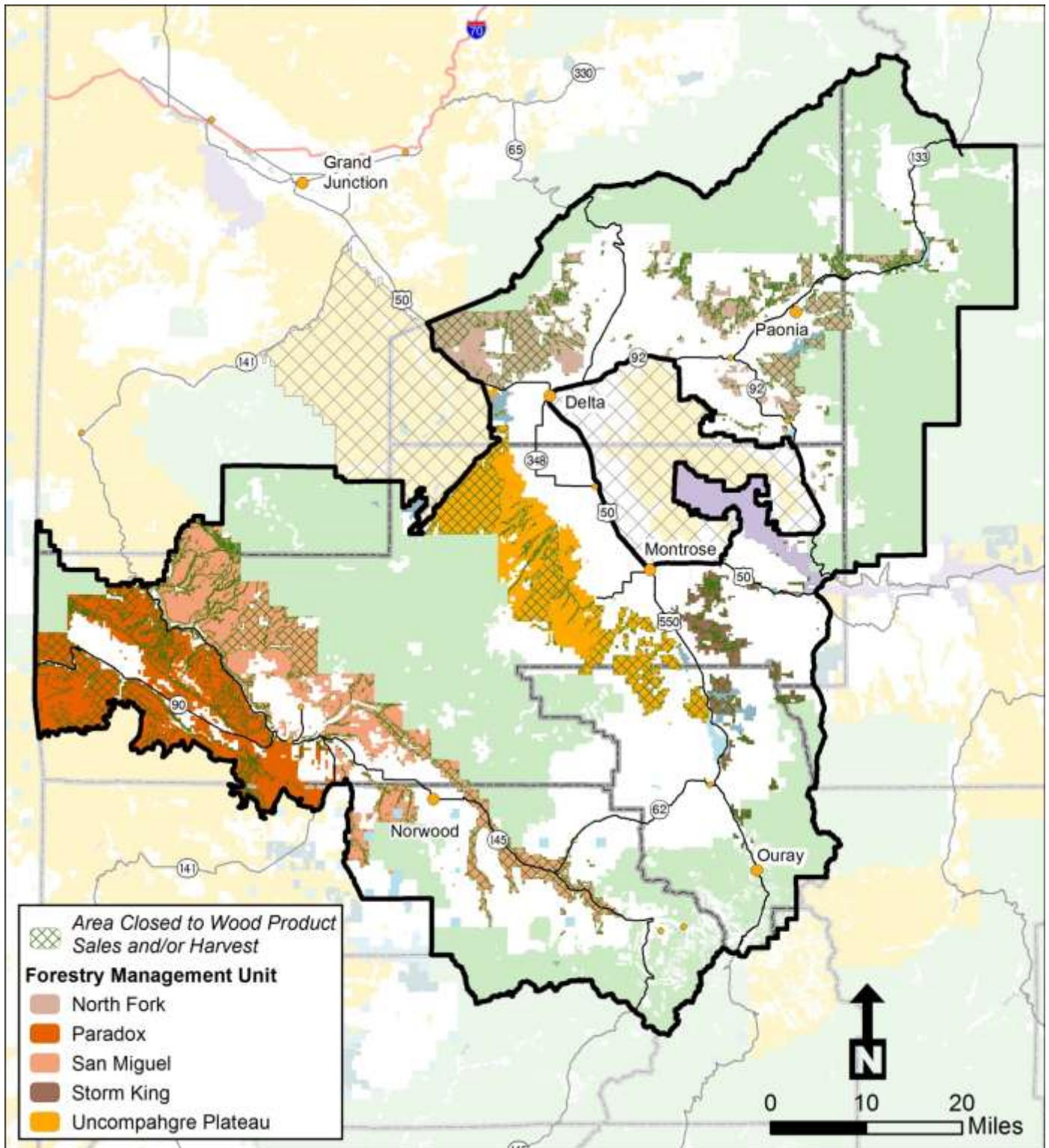


Figure 2-74: Alternative D: Forest Management

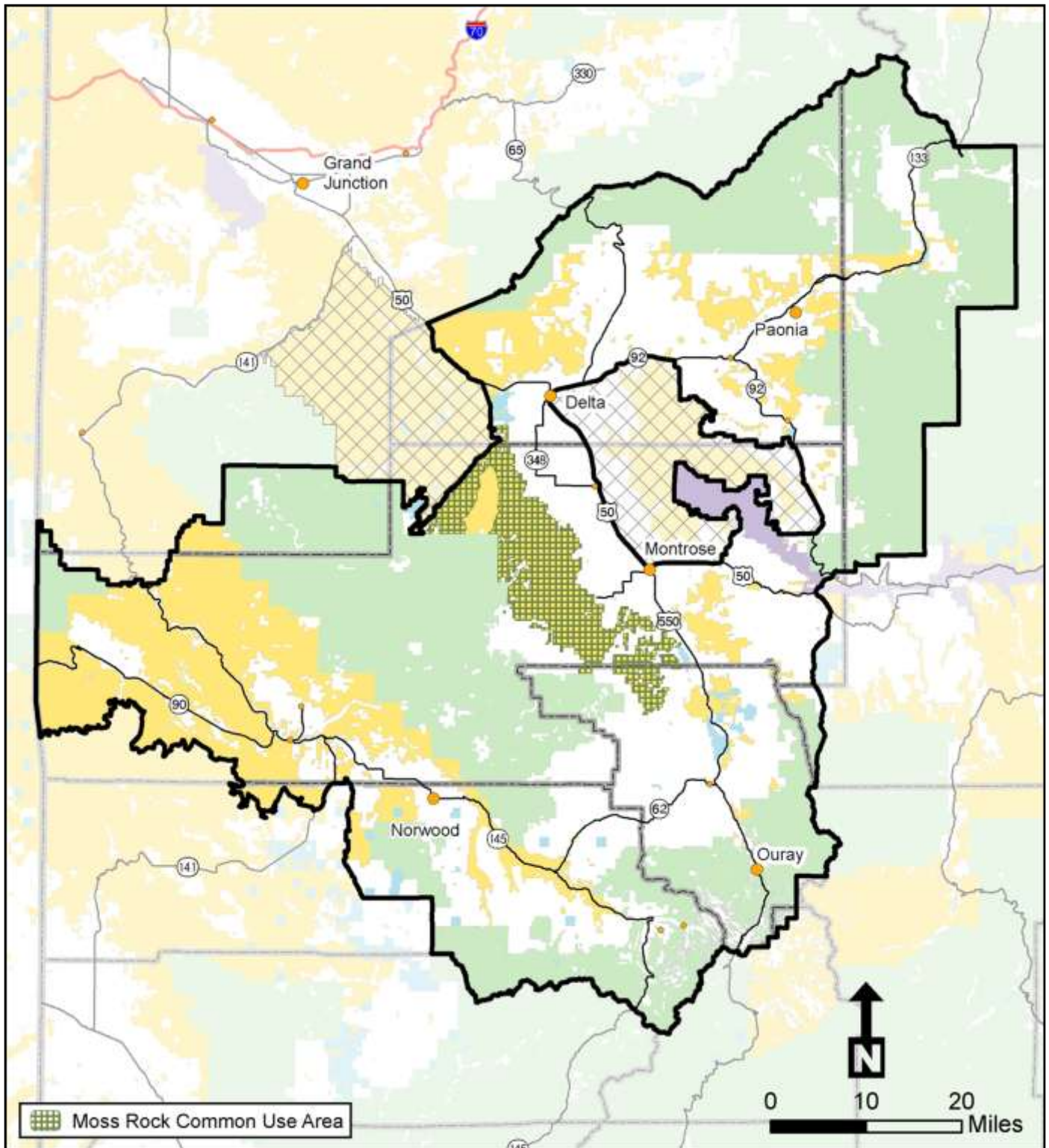
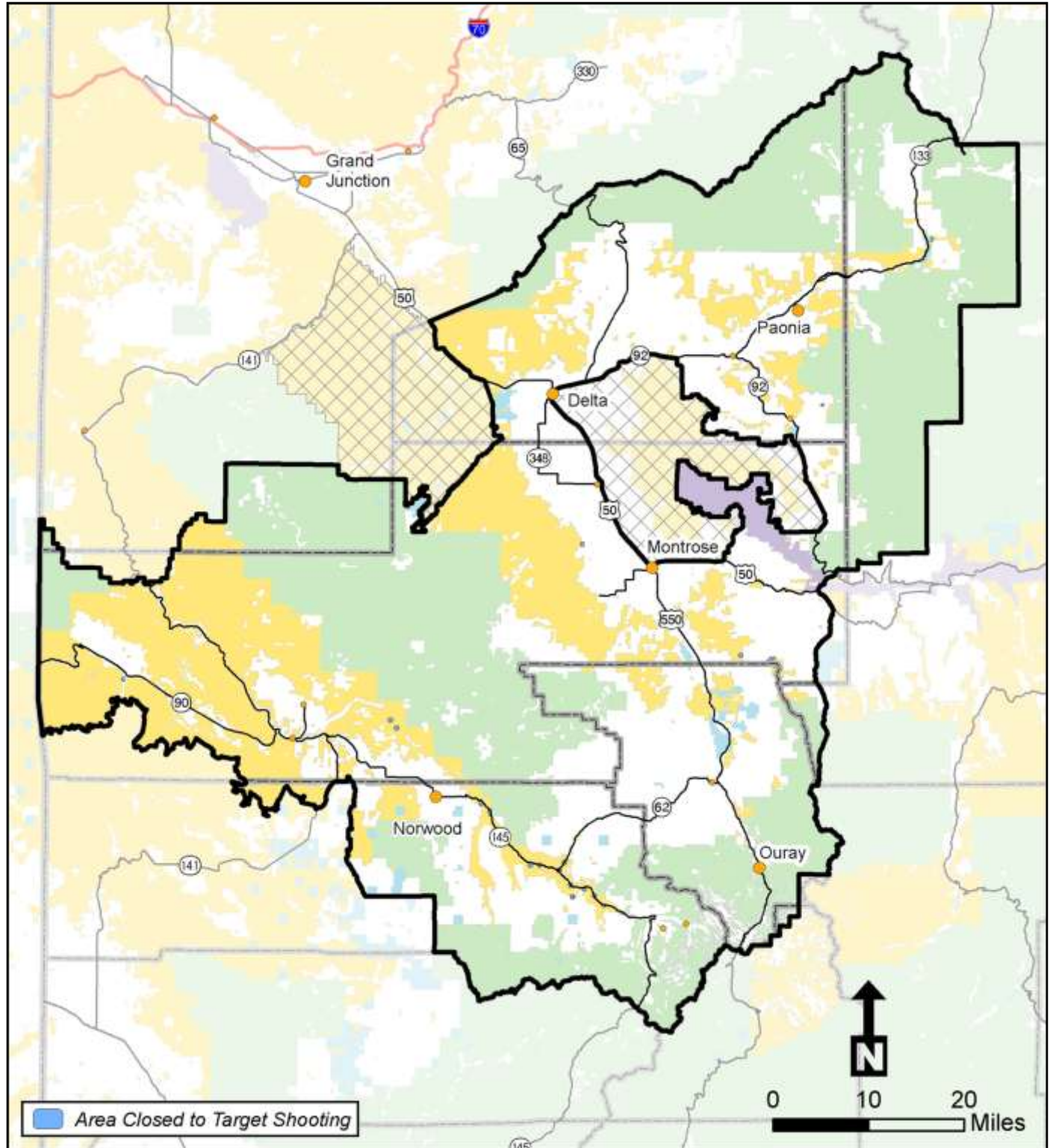


Figure 2-75: Alternatives A, B, C, and D: Moss Rock Common Use Area





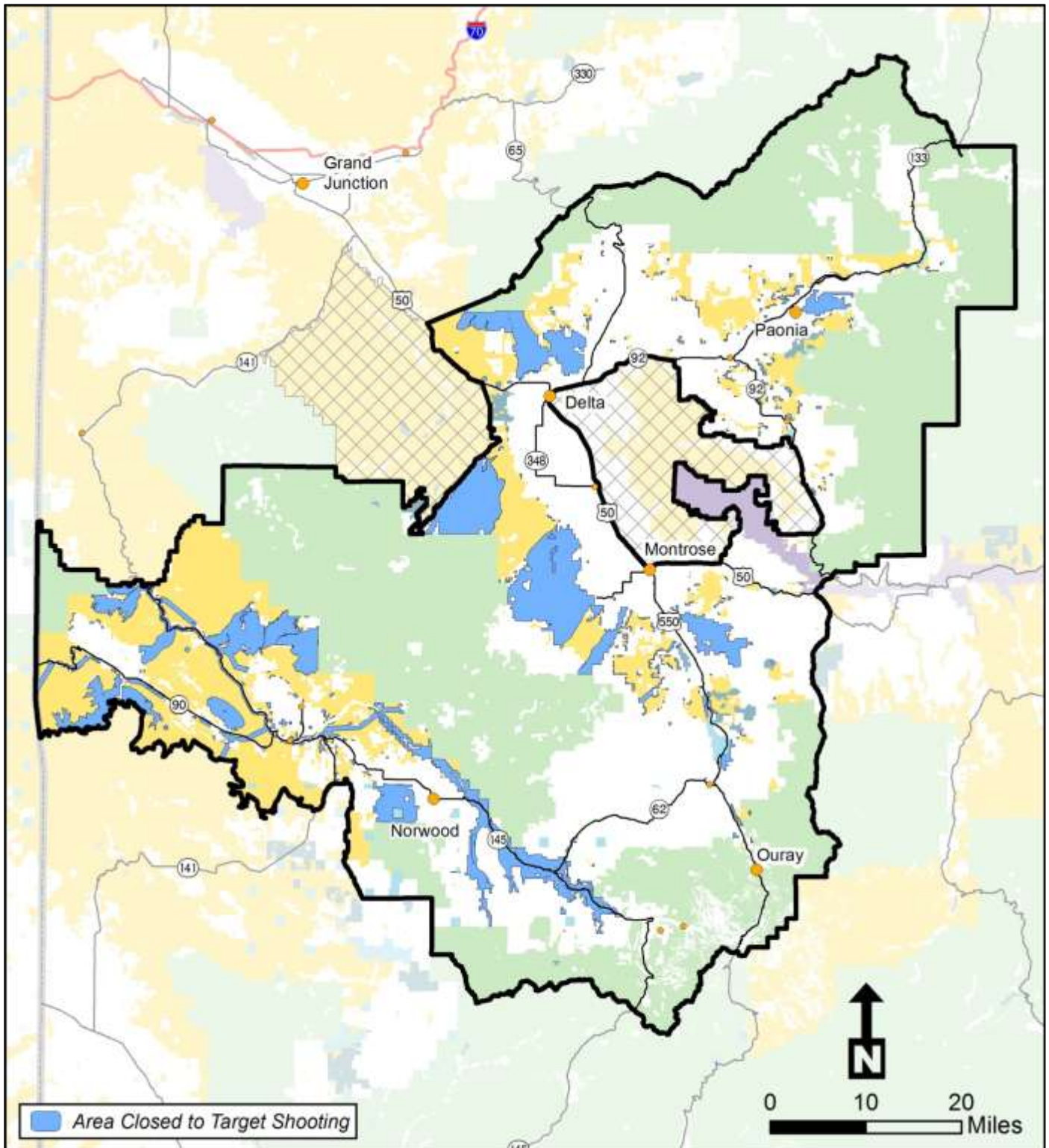
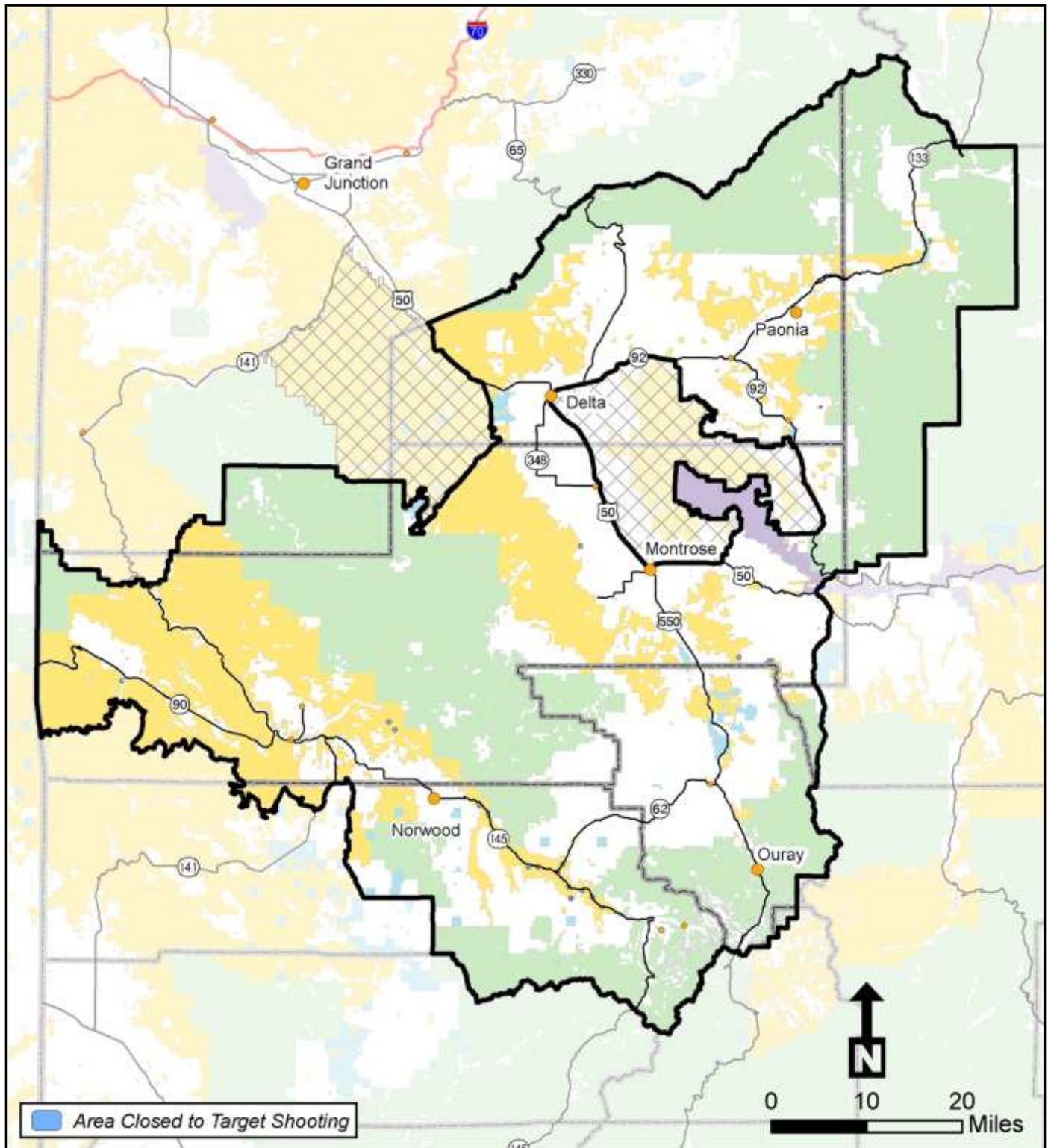


Figure 2-77: Alternative B: No Target Shooting Areas





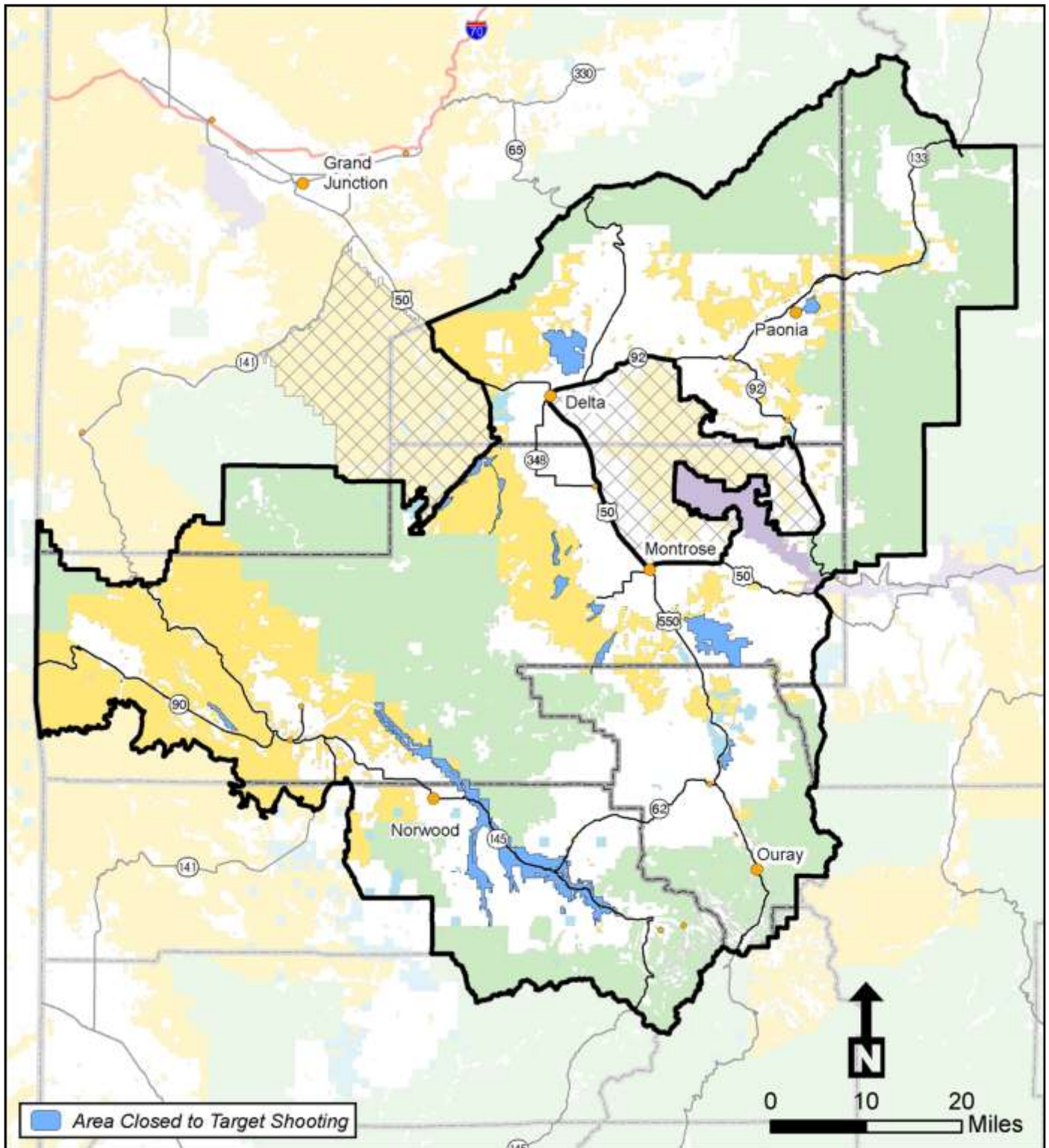


Figure 2-79: Alternative D: No Target Shooting Areas



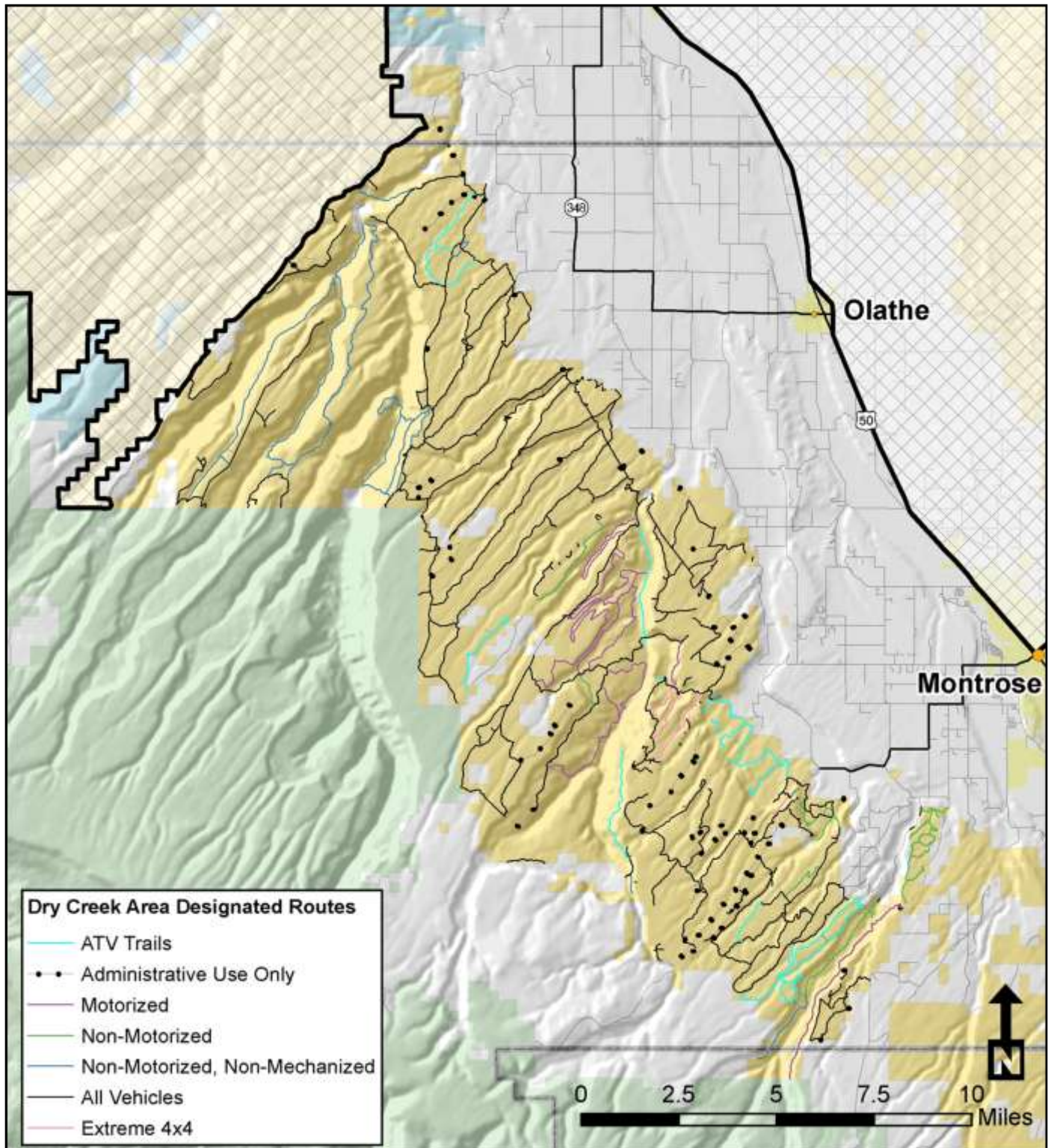


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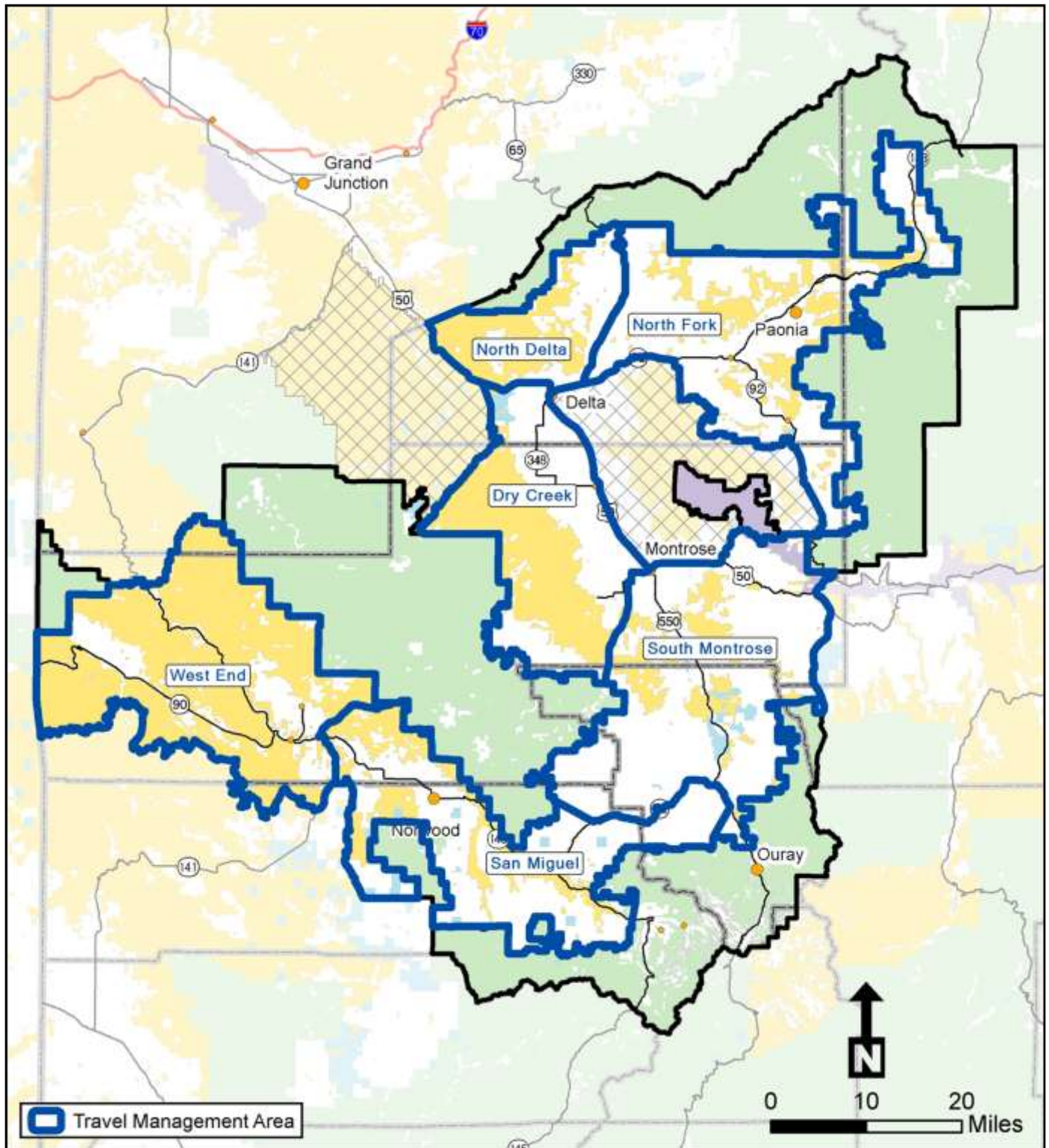


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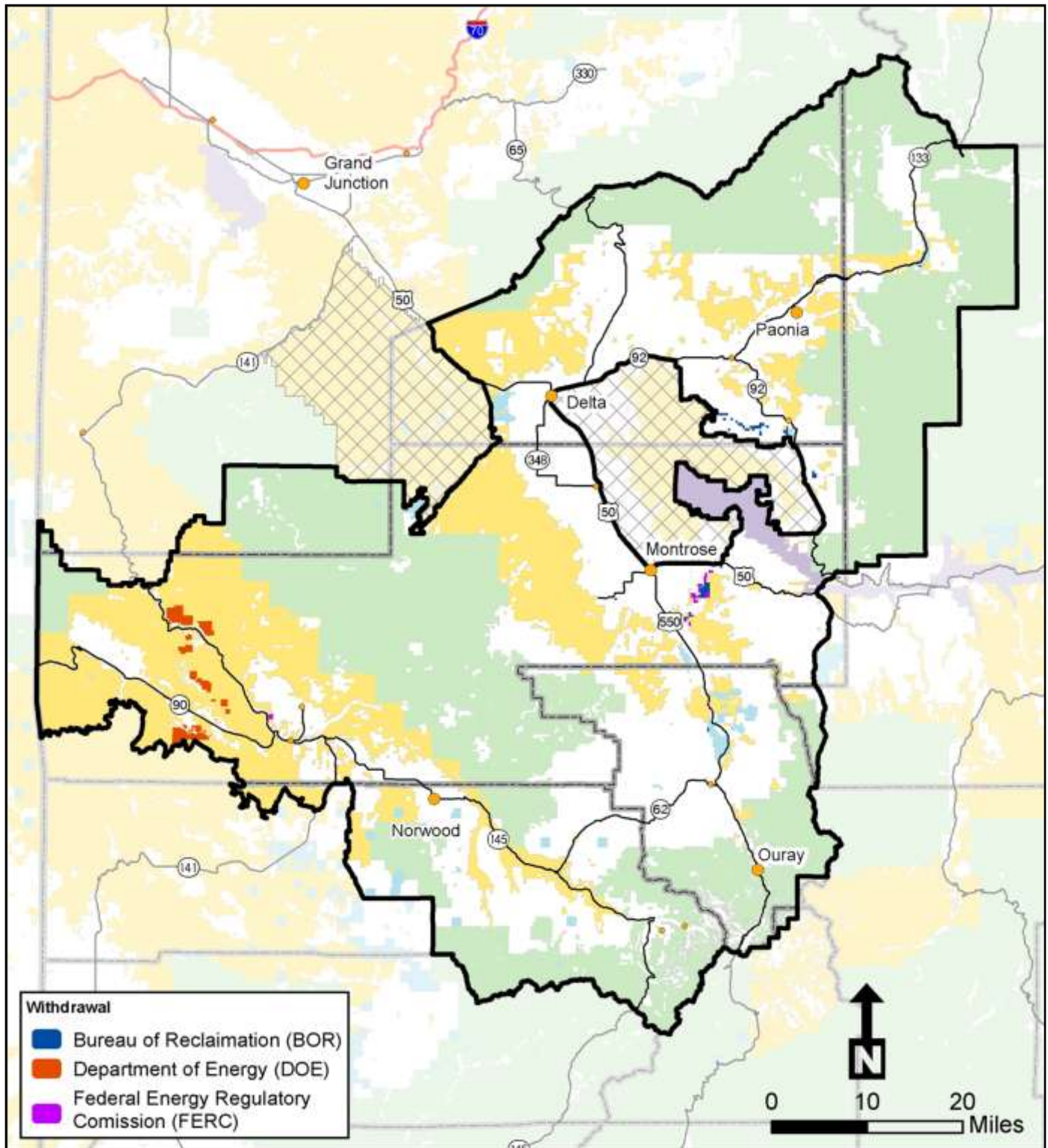


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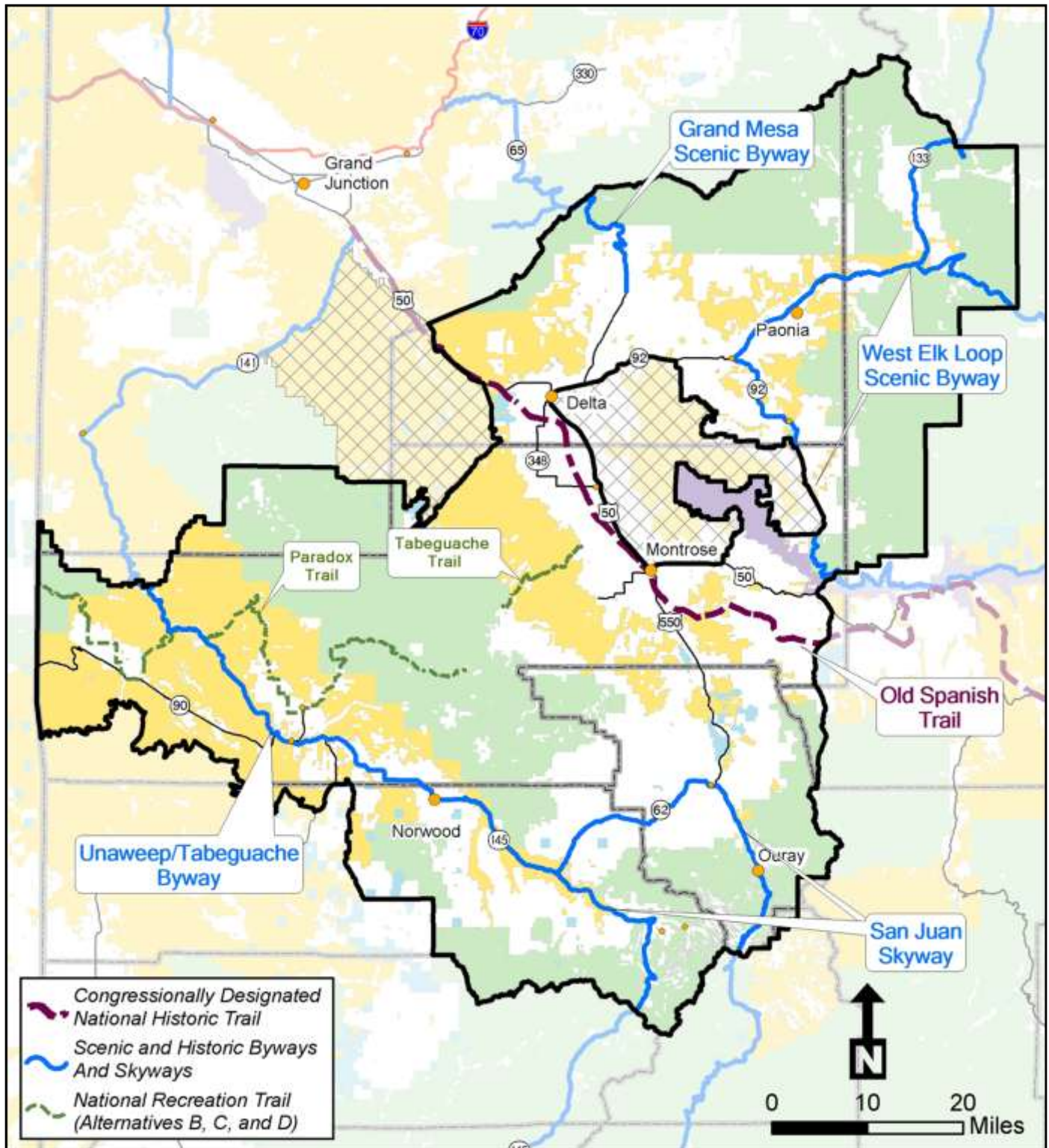


Figure 2-83: Alternative A: National Historic Trails and State and BLM Byways



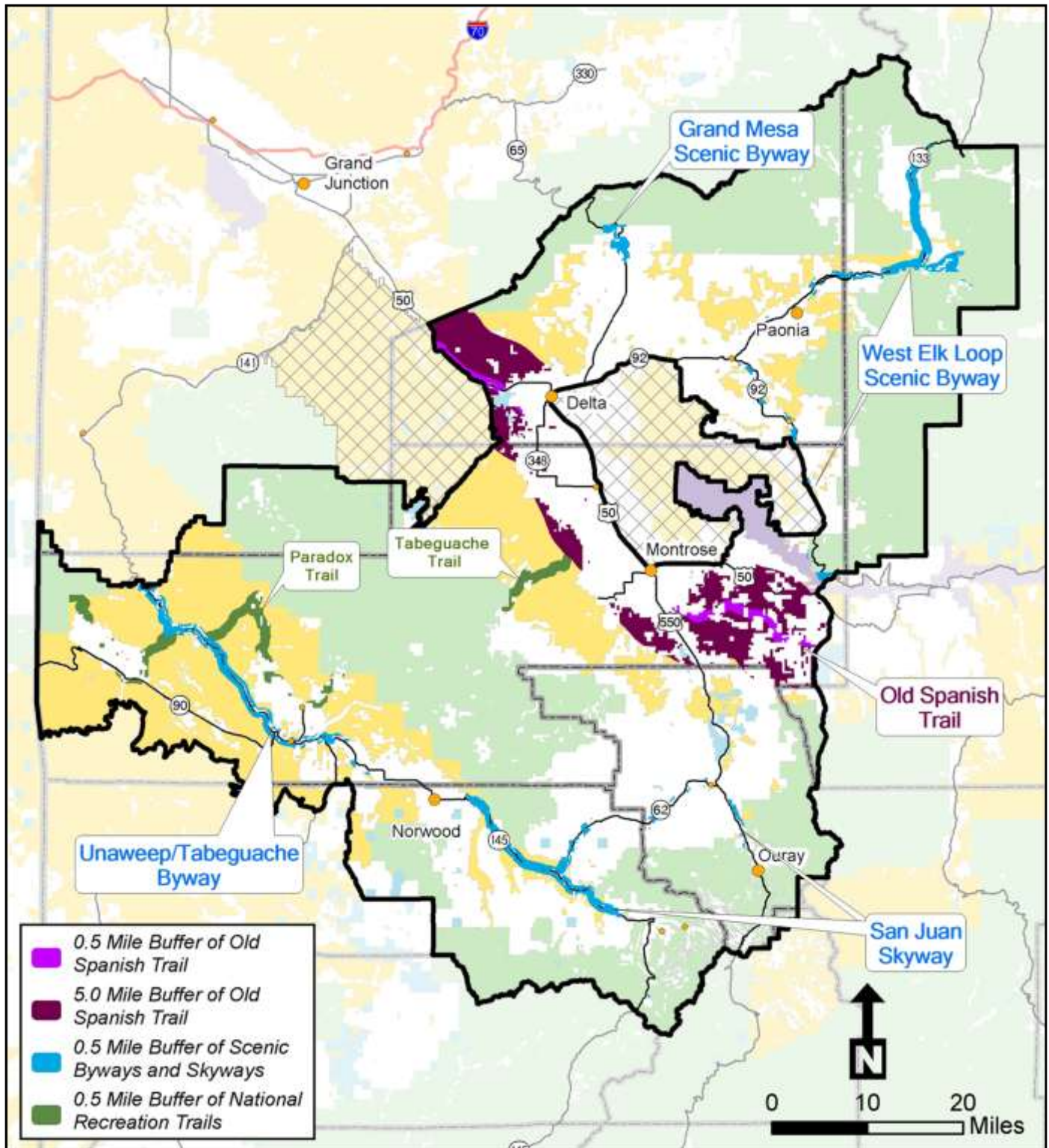


Figure 2-84: Alternative B: National Scenic, Historic, and Recreational Trails and State and BLM Byways

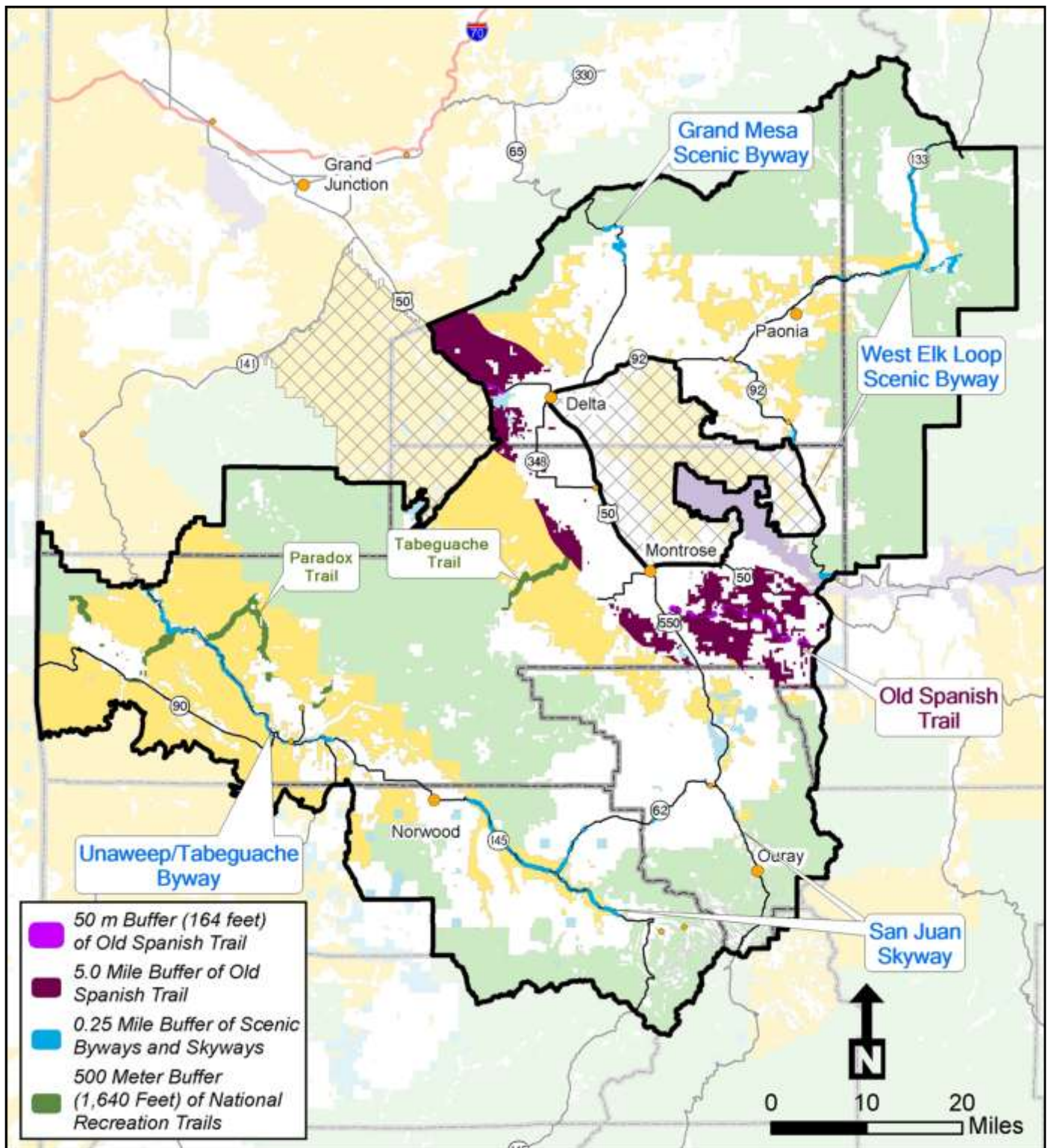


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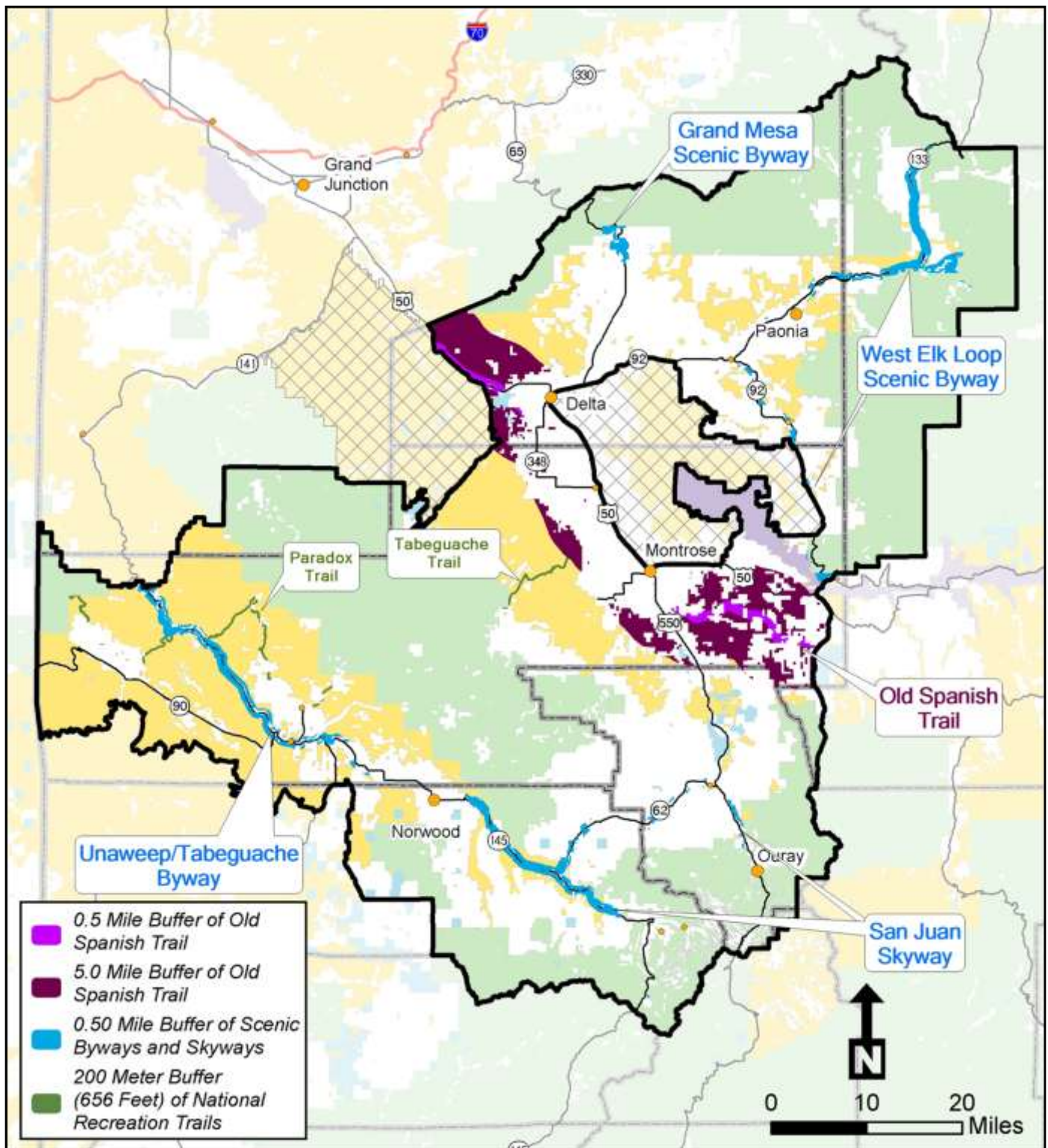


Figure 2-86: Alternative D: National Scenic, Historic, and Recreational Trails and State and BLM Byways

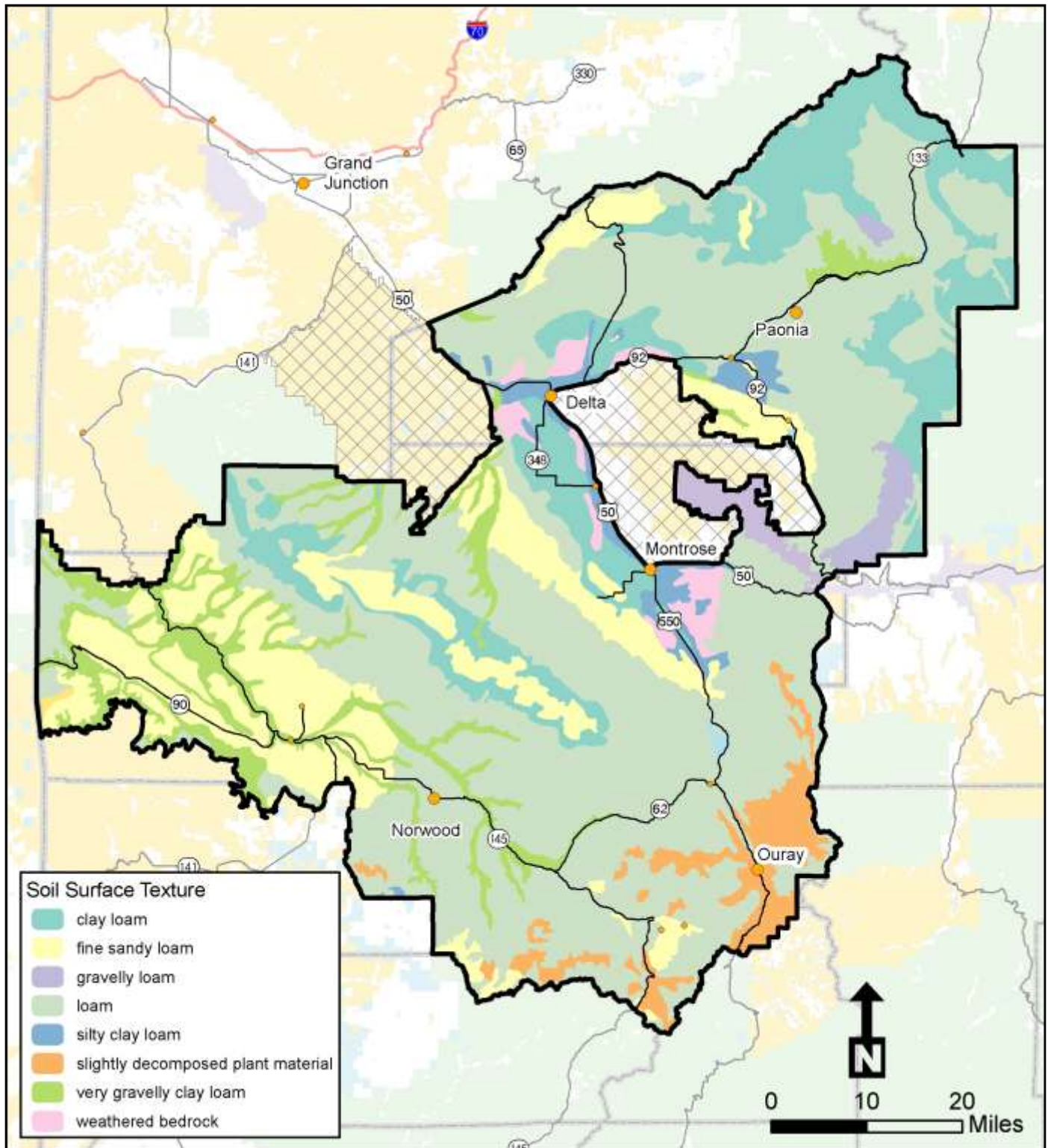


Figure 3-1: Major Soil Units



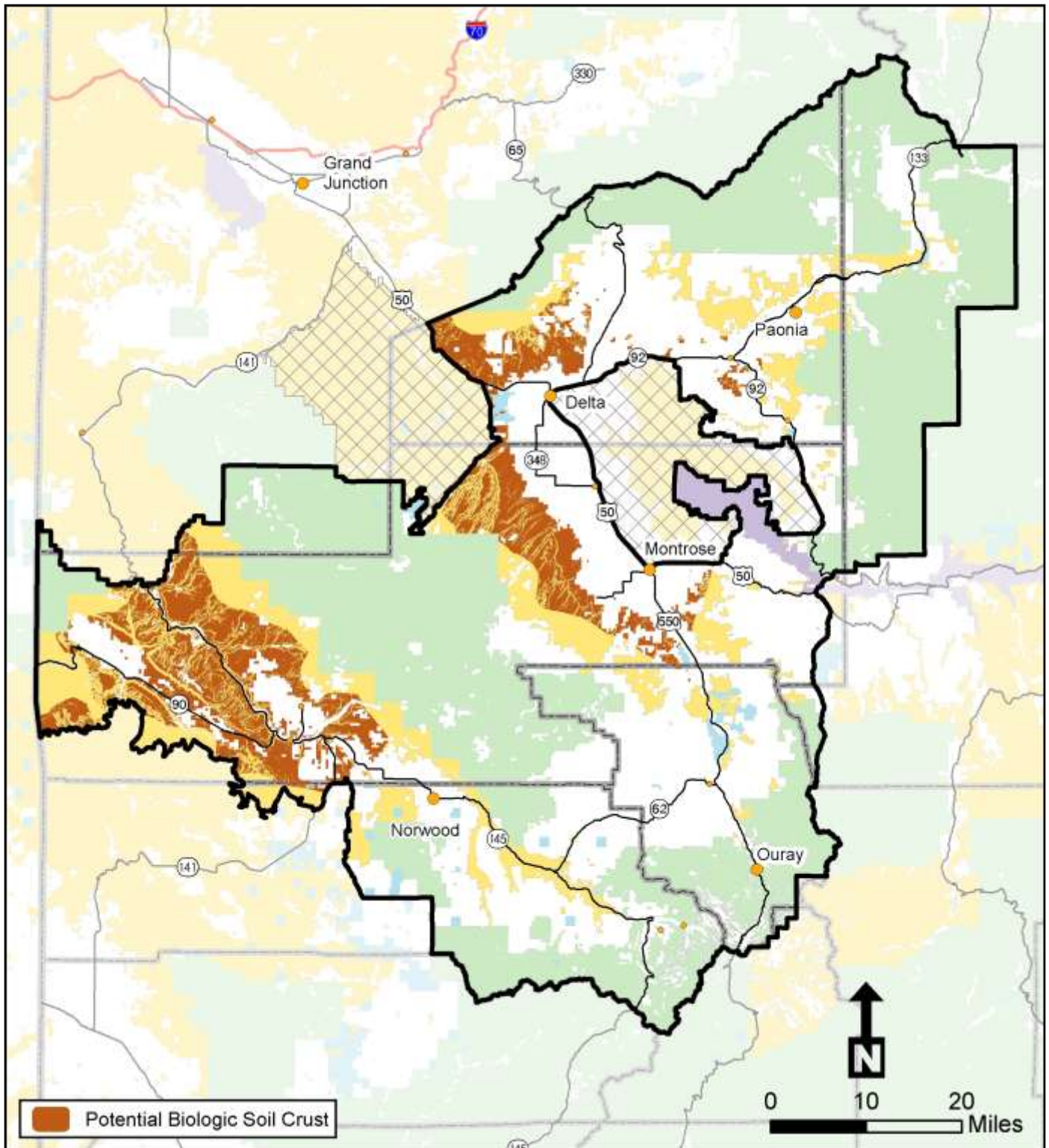


Figure 3-2: Potential Biotic Soil Crust Locations

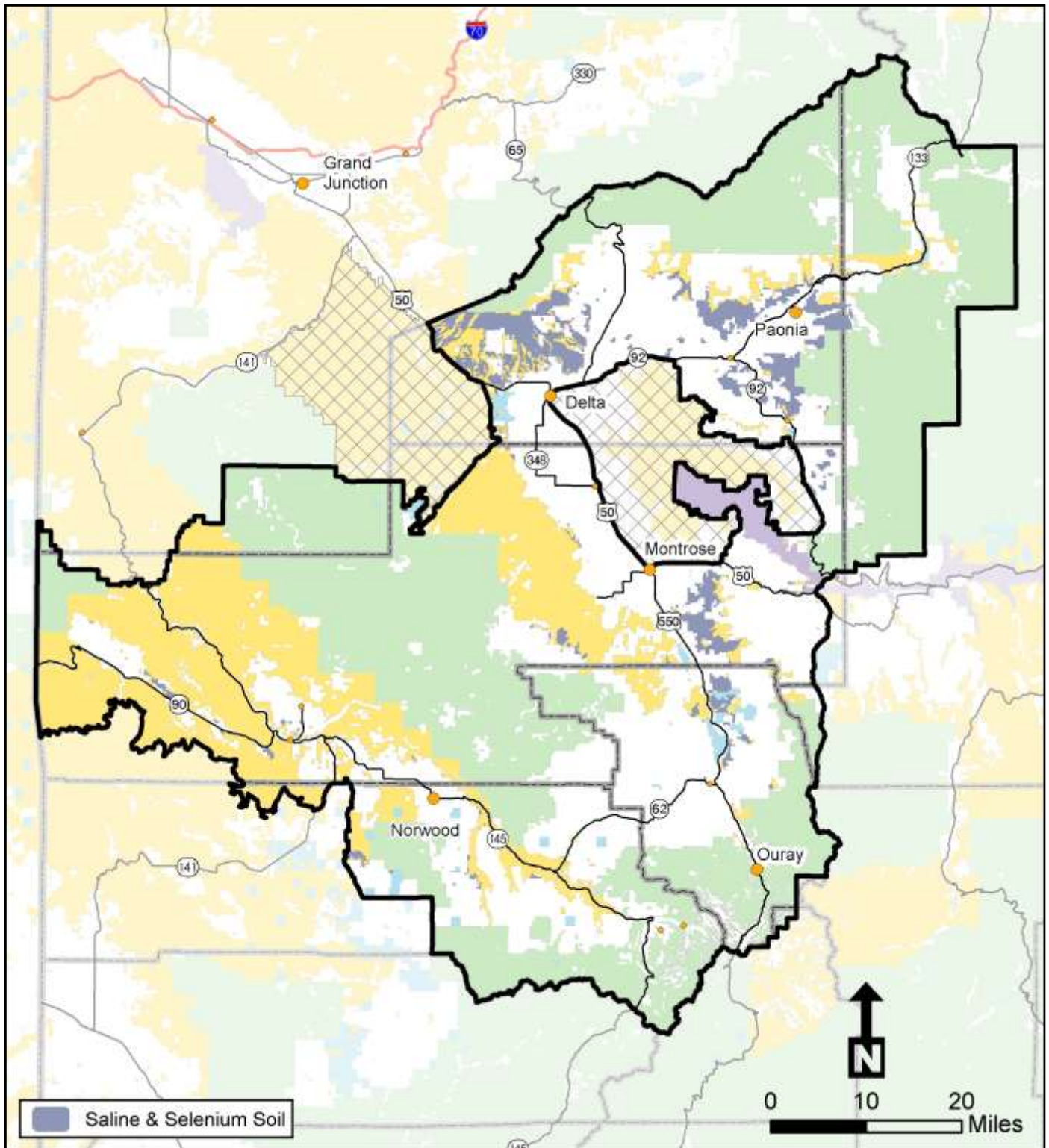


Figure 3-3: Saline and Selenium Enriched Soils



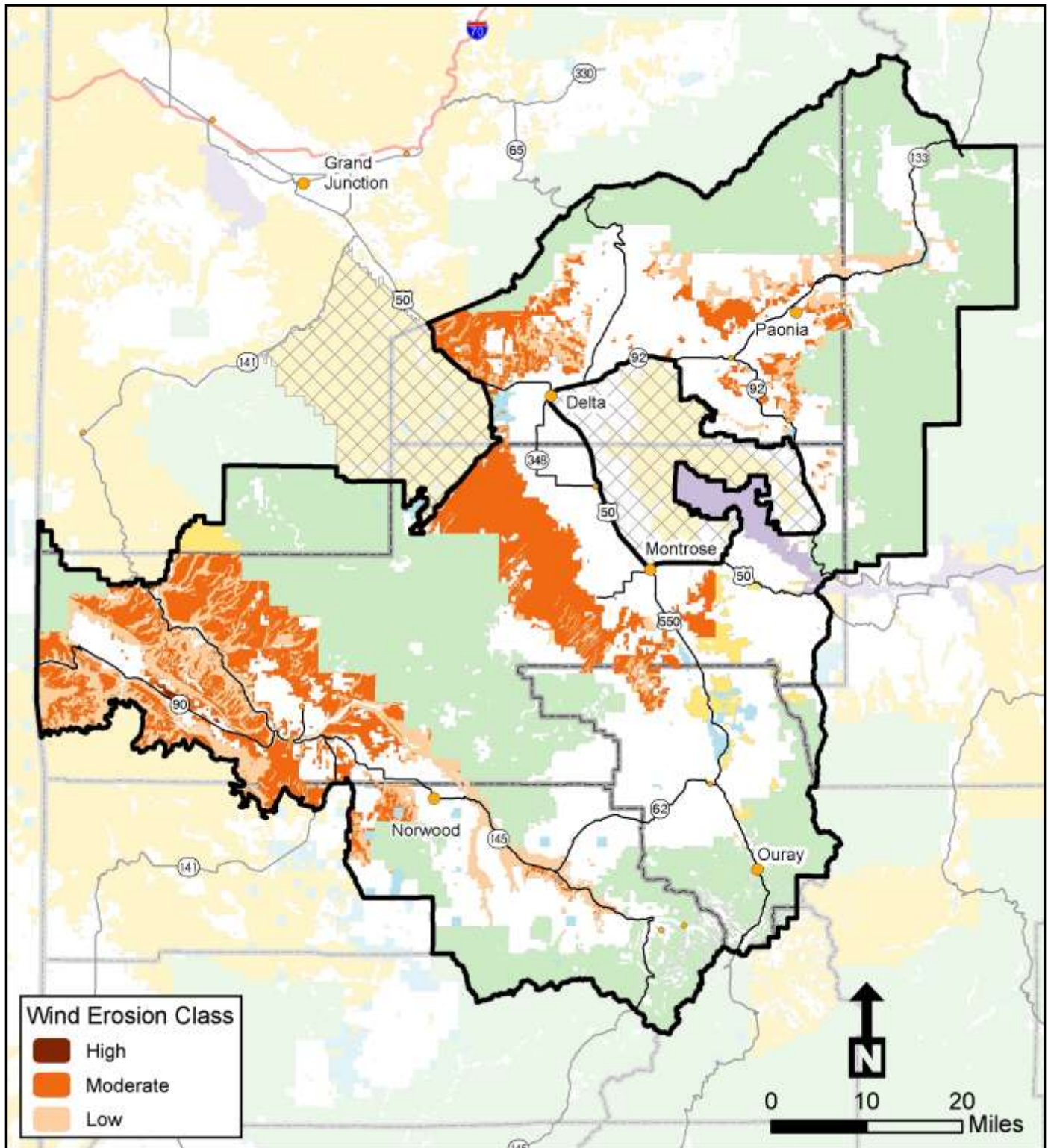


Figure 3-4: Wind Erosion Areas

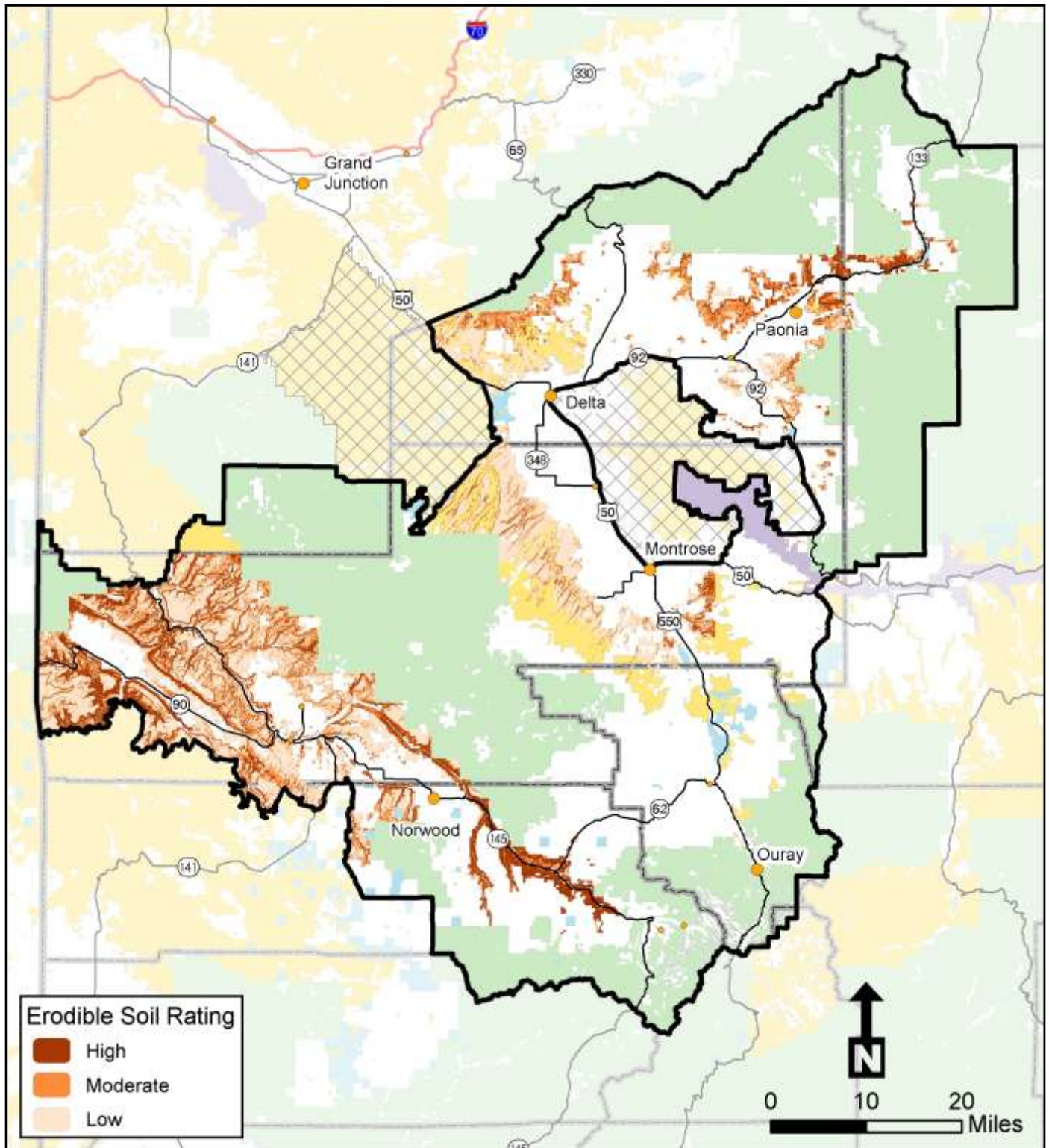


Figure 3-5: Soil Erosion Capacity



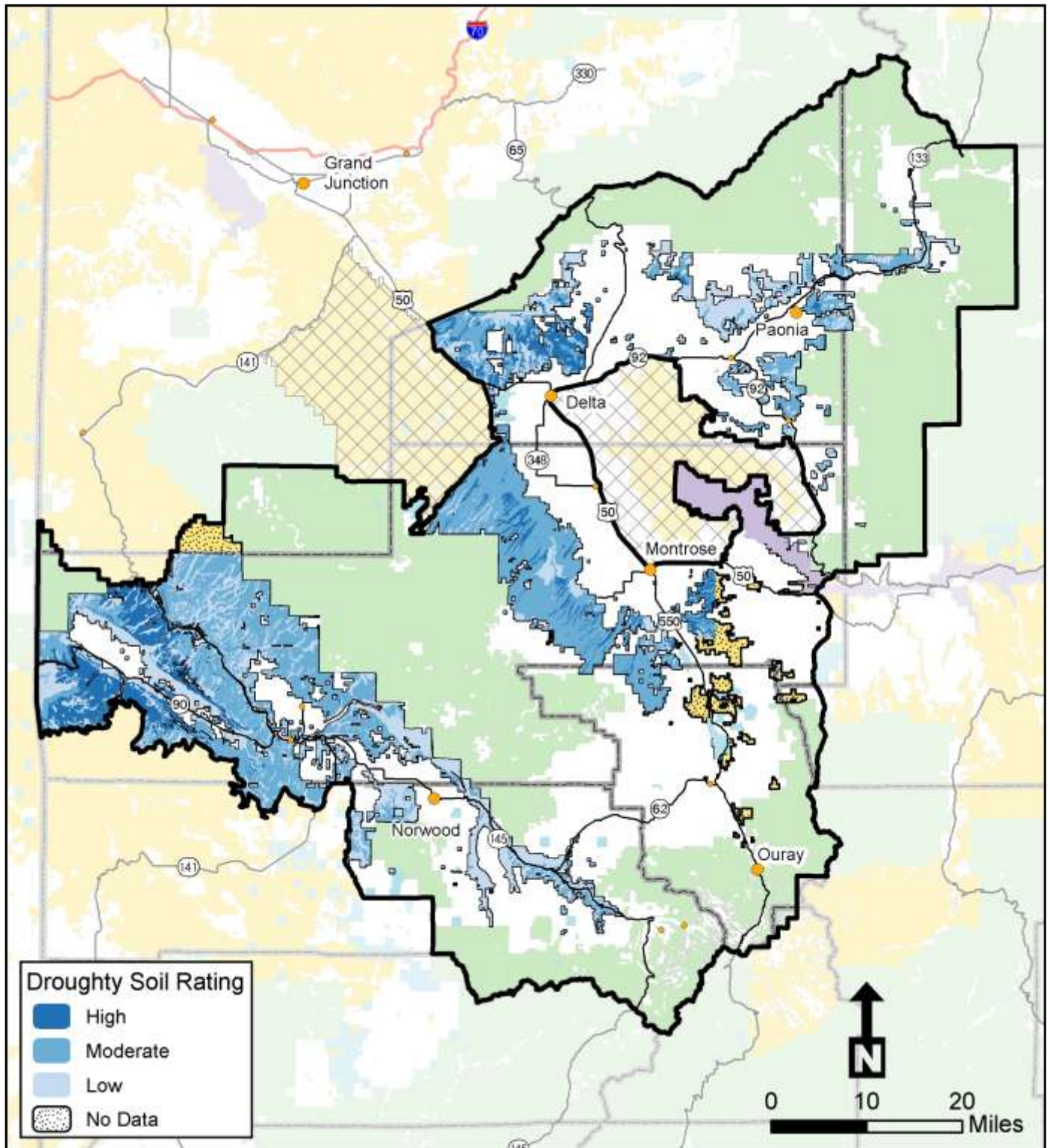


Figure 3-6: Droughty Soil Areas

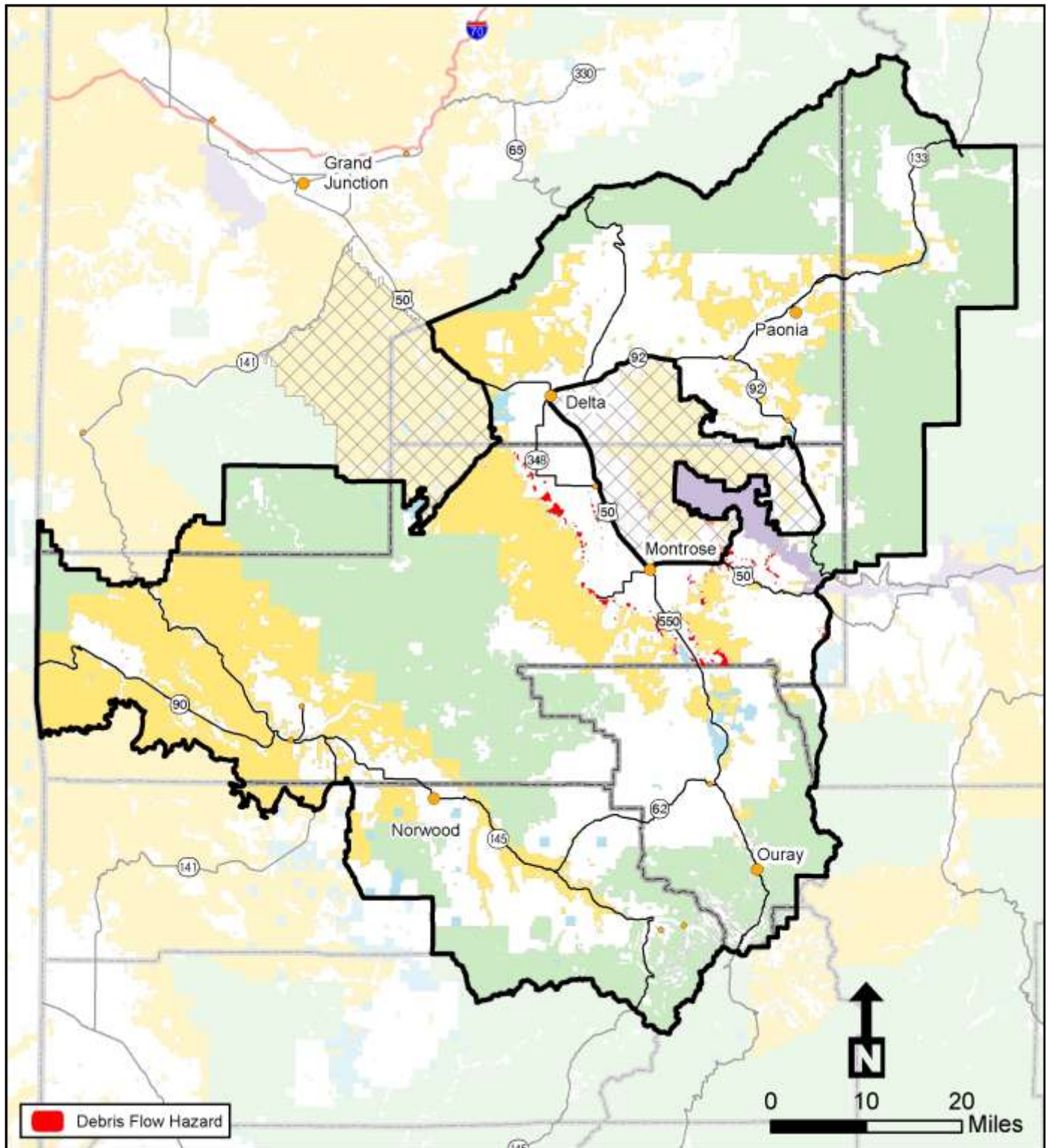


Figure 3-7: Flood Hazard Areas



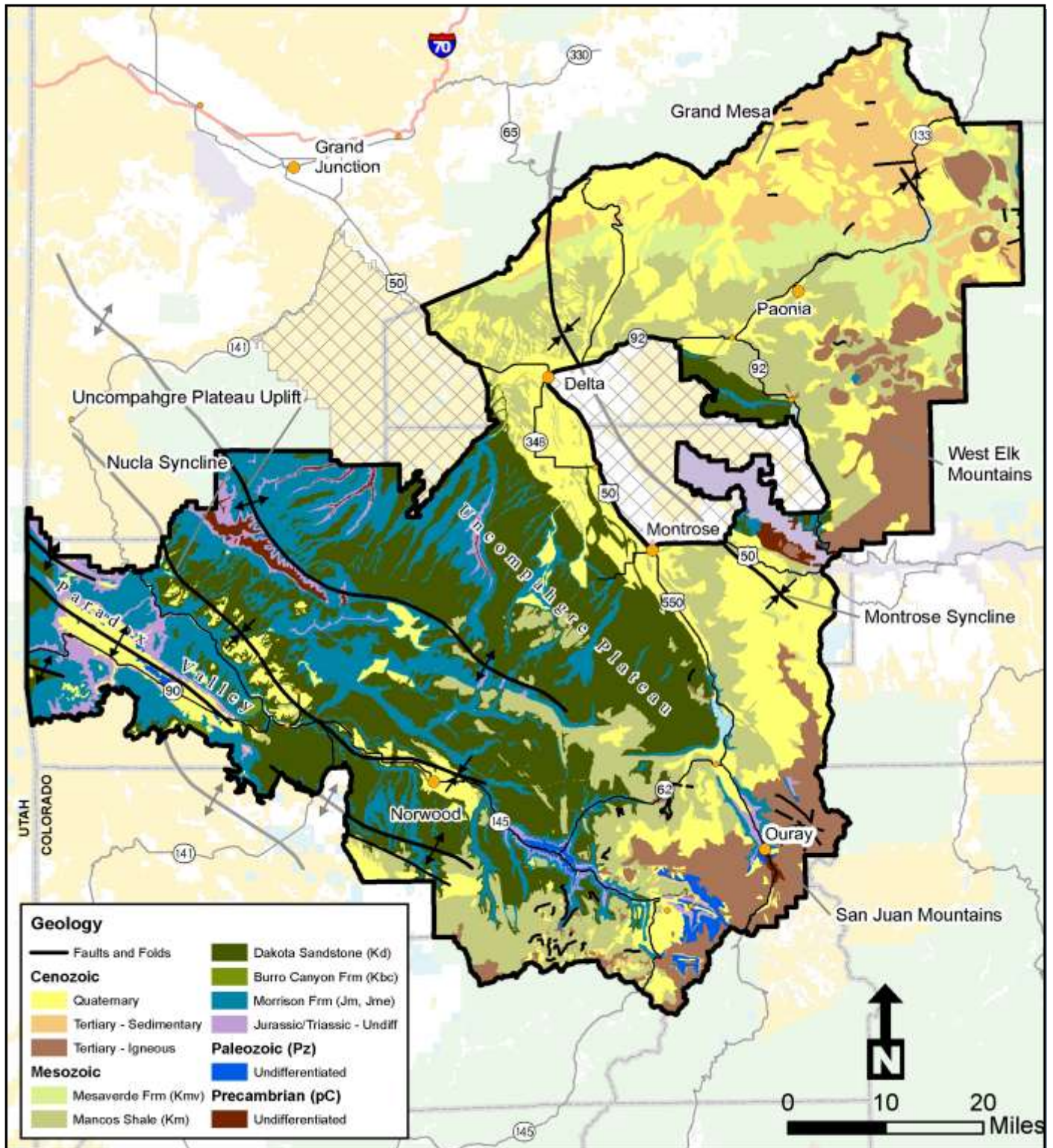


Figure 3-8: Geology of the Uncompahgre RMP Planning Area



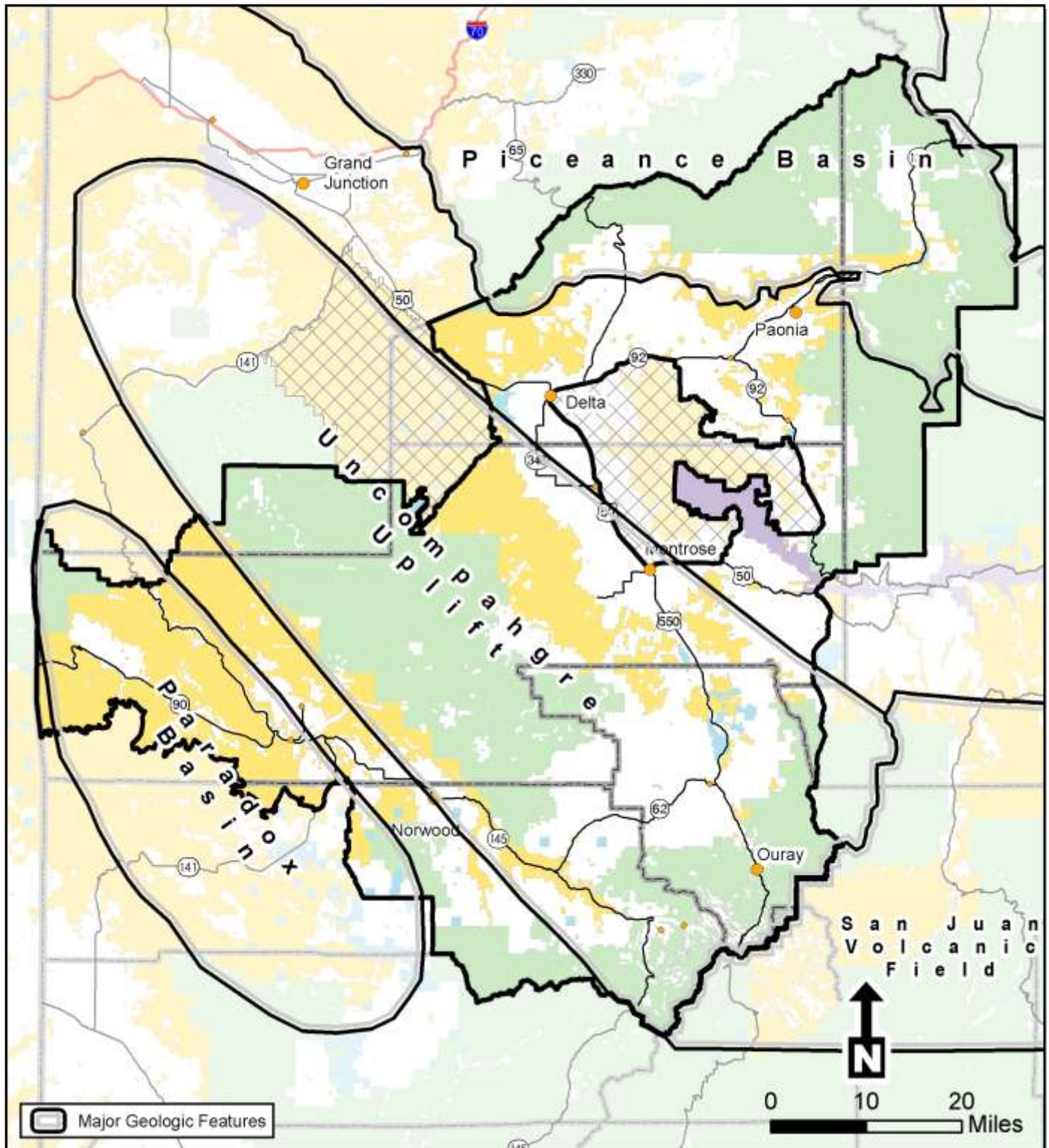


Figure 3-9: Major Geologic Structural Features



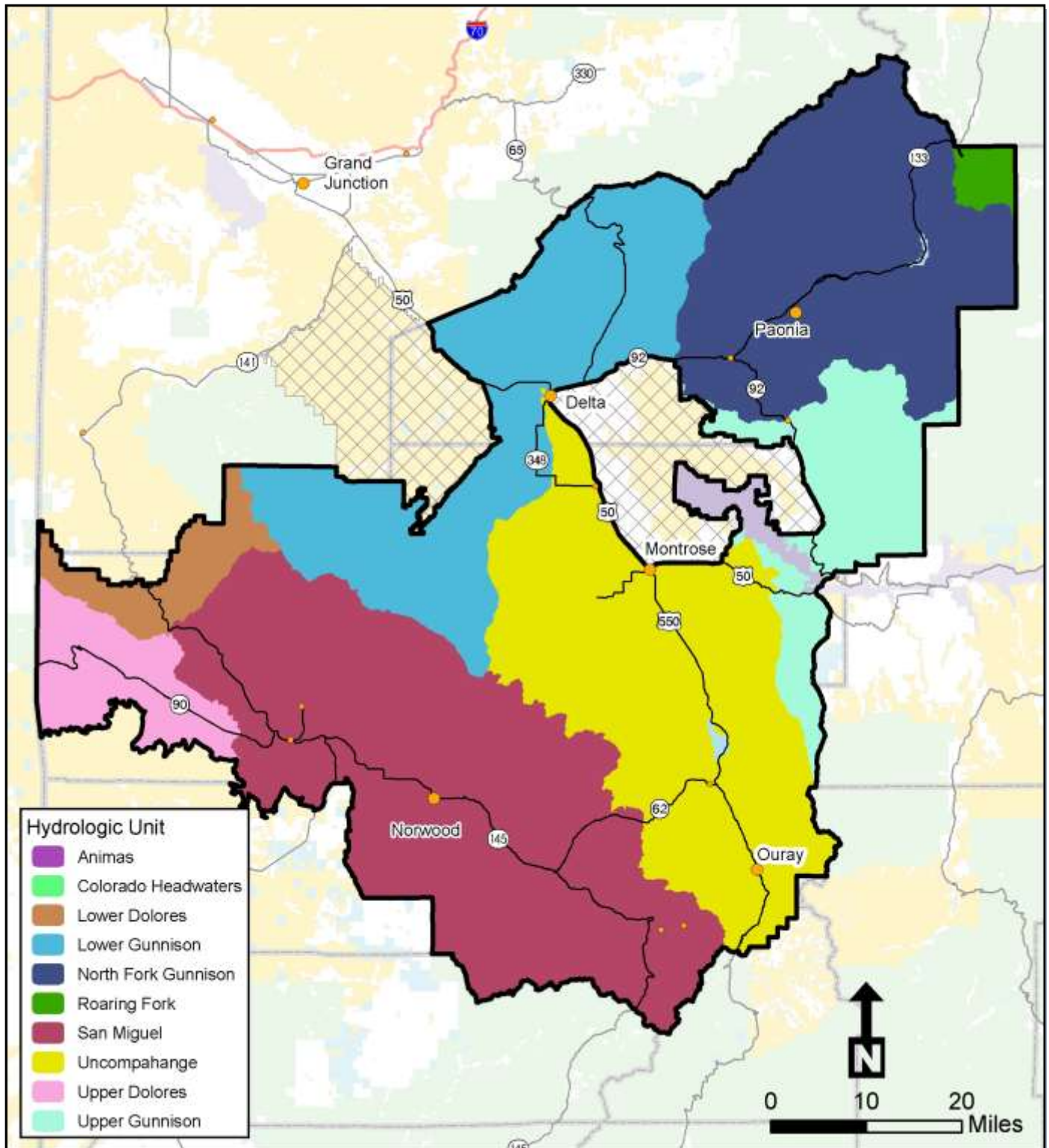


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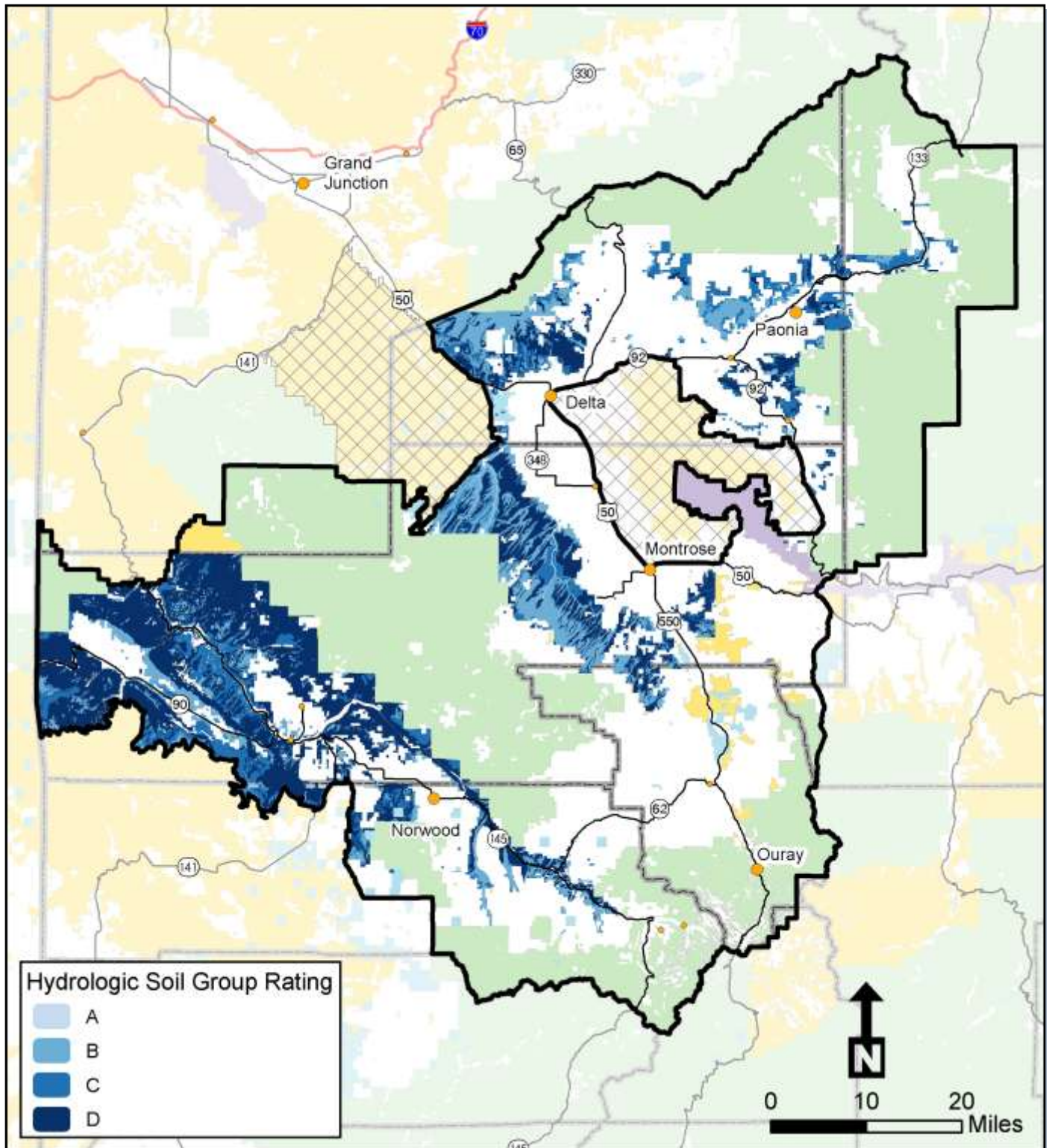


Figure 3-11: Distribution of Hydrologic Soil Groups



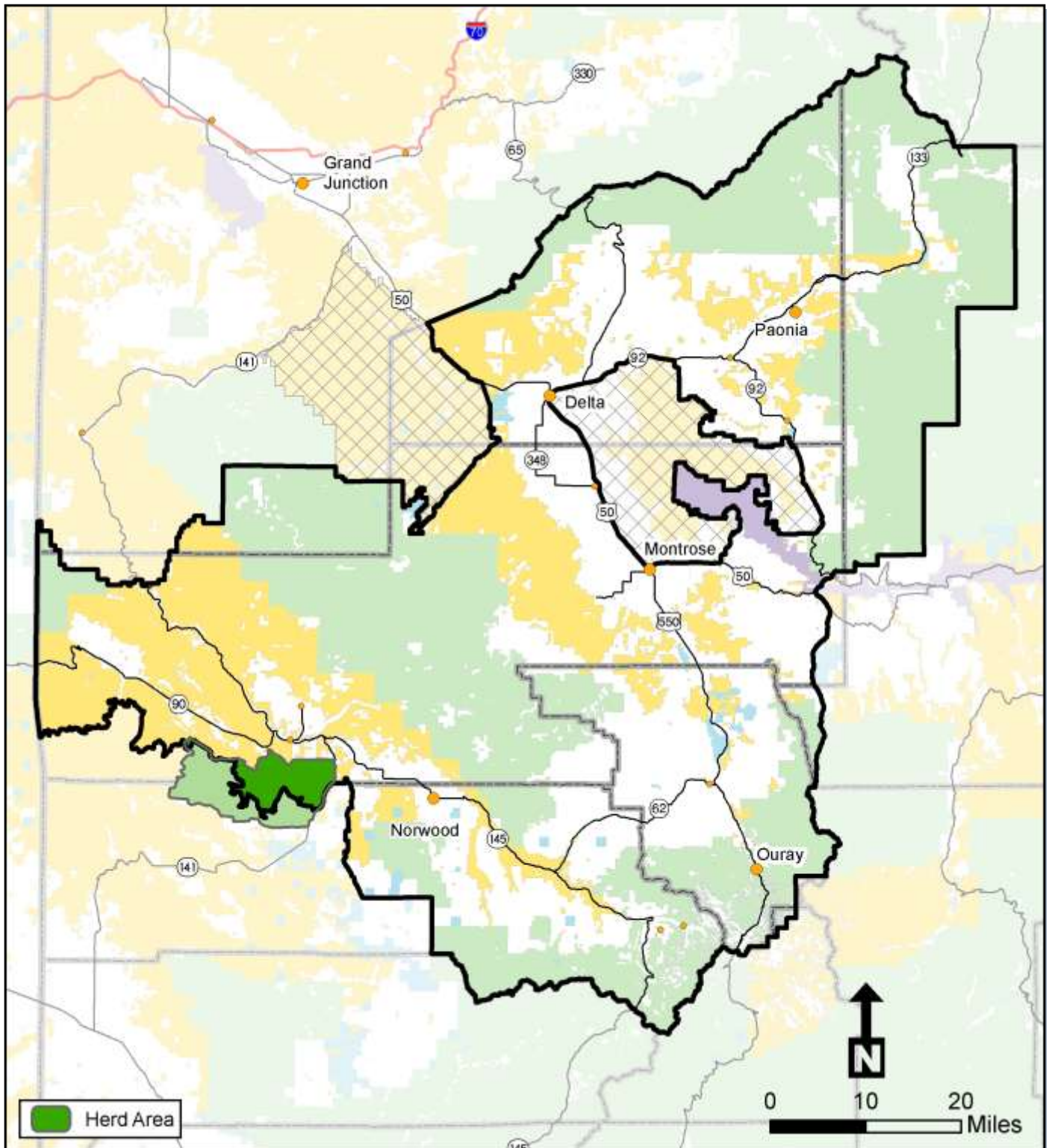


Figure 3-12: Naturita Ridge Herd Area

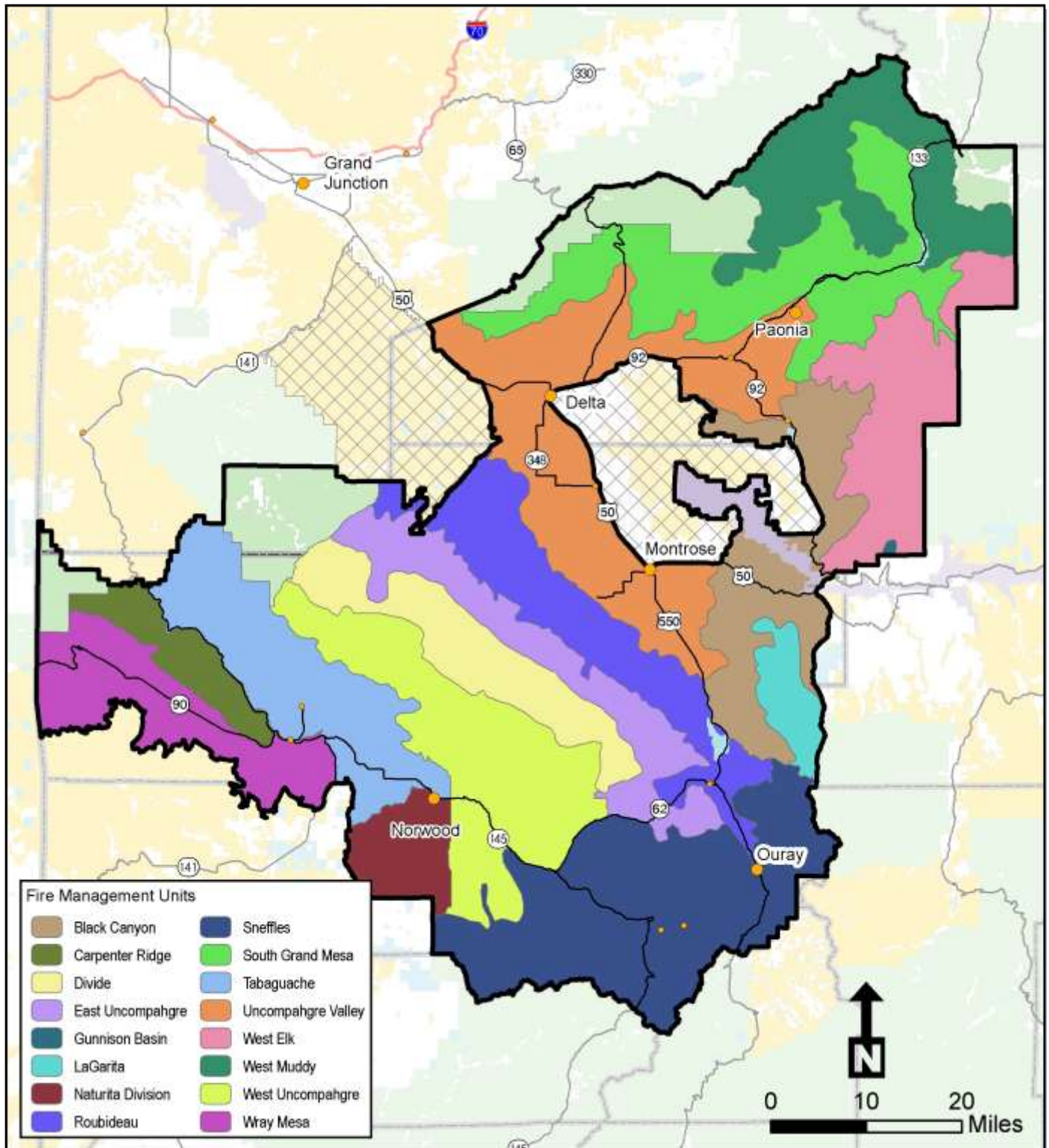


Figure 3-13: Fire Management Units



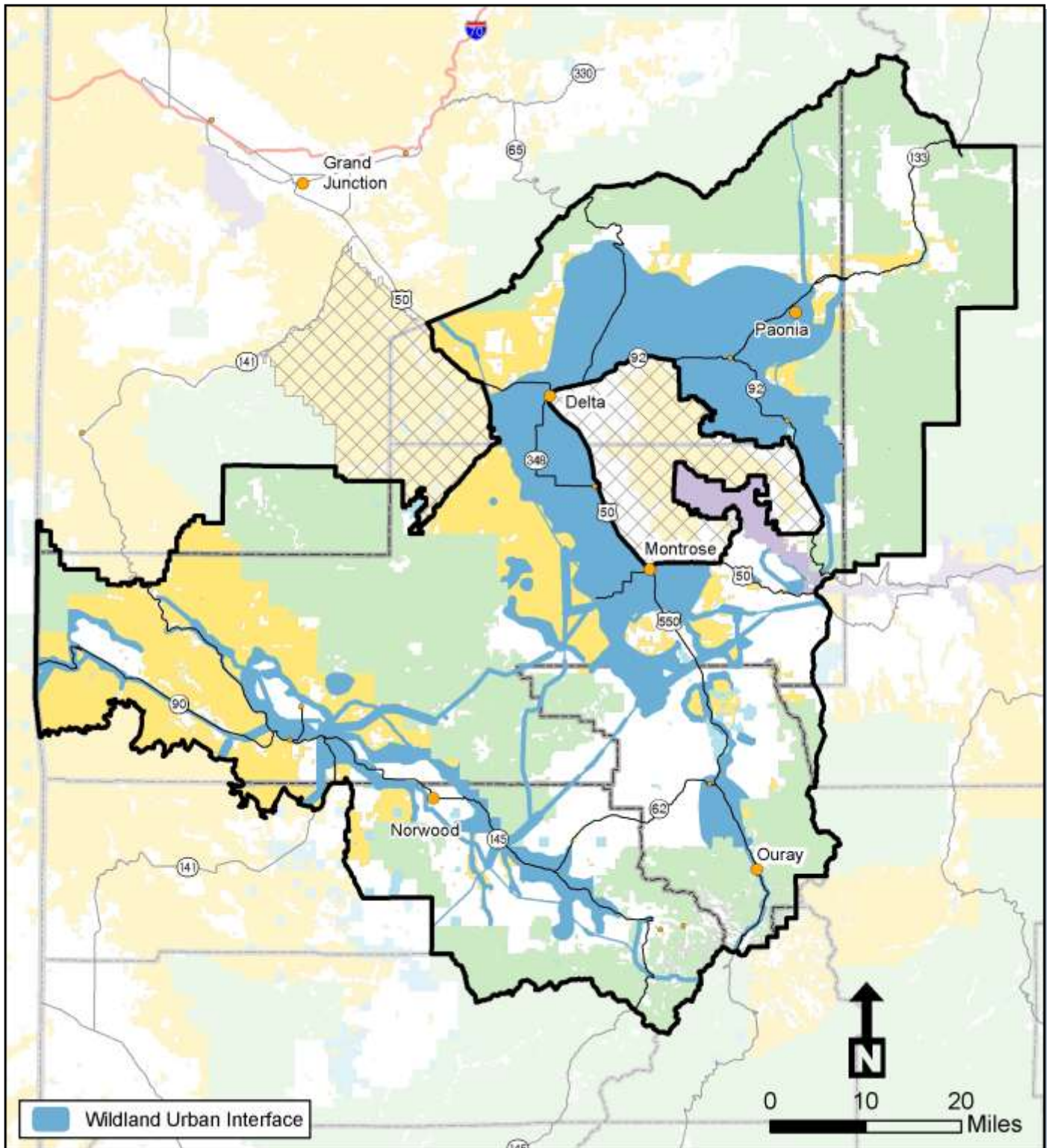


Figure 3-14: Wildland Urban Interface

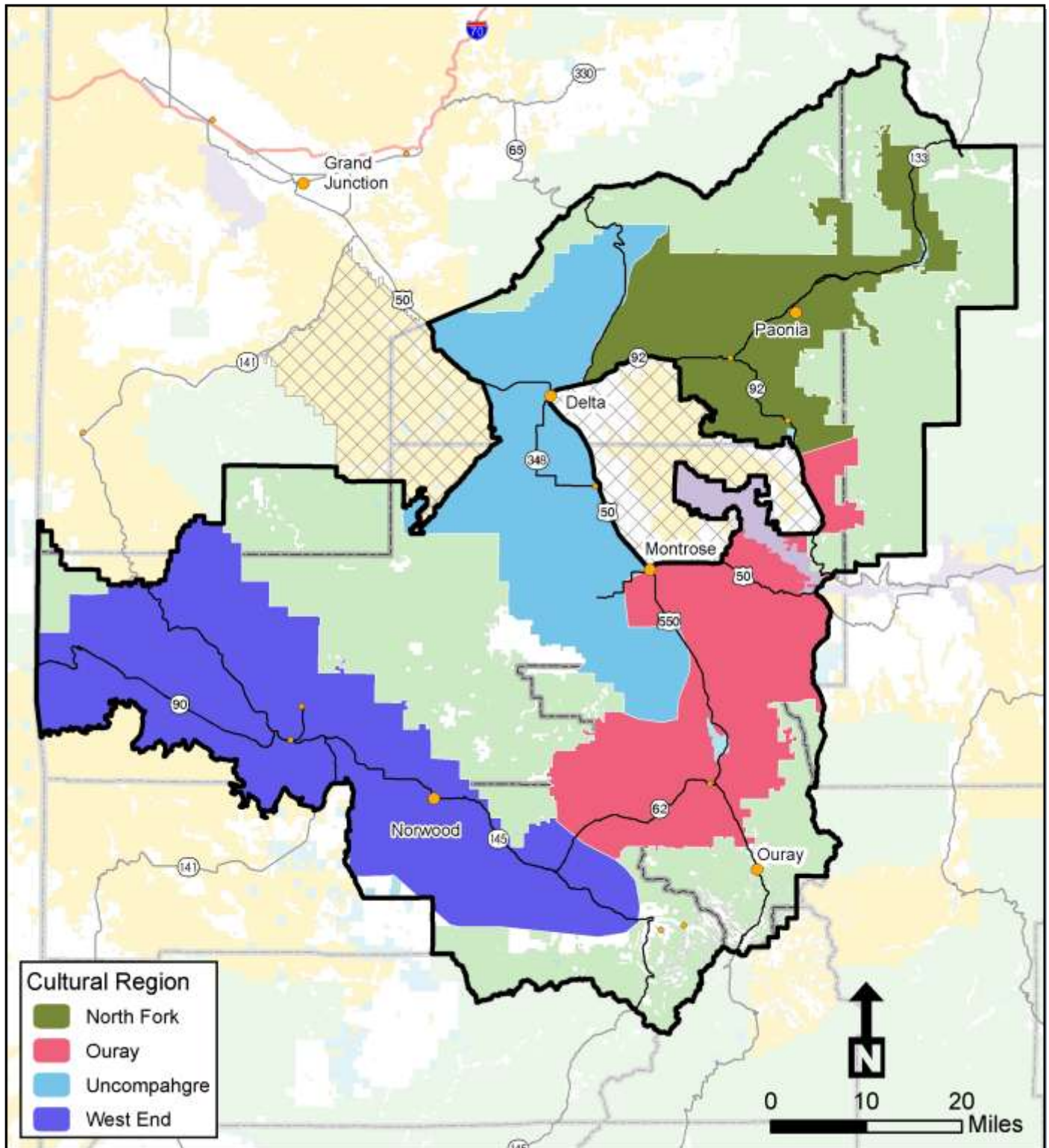


Figure 3-15: Cultural Resource Units



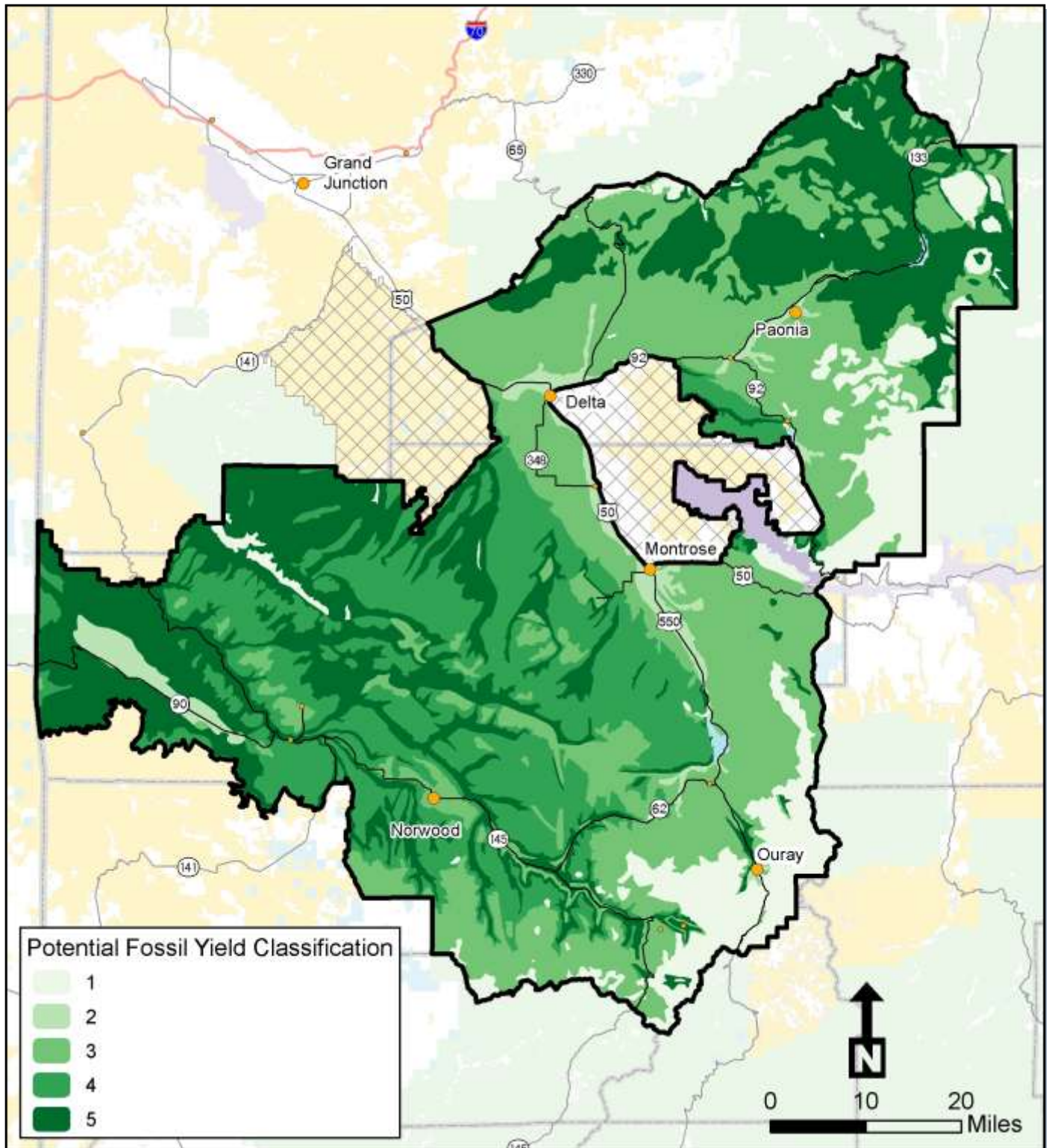


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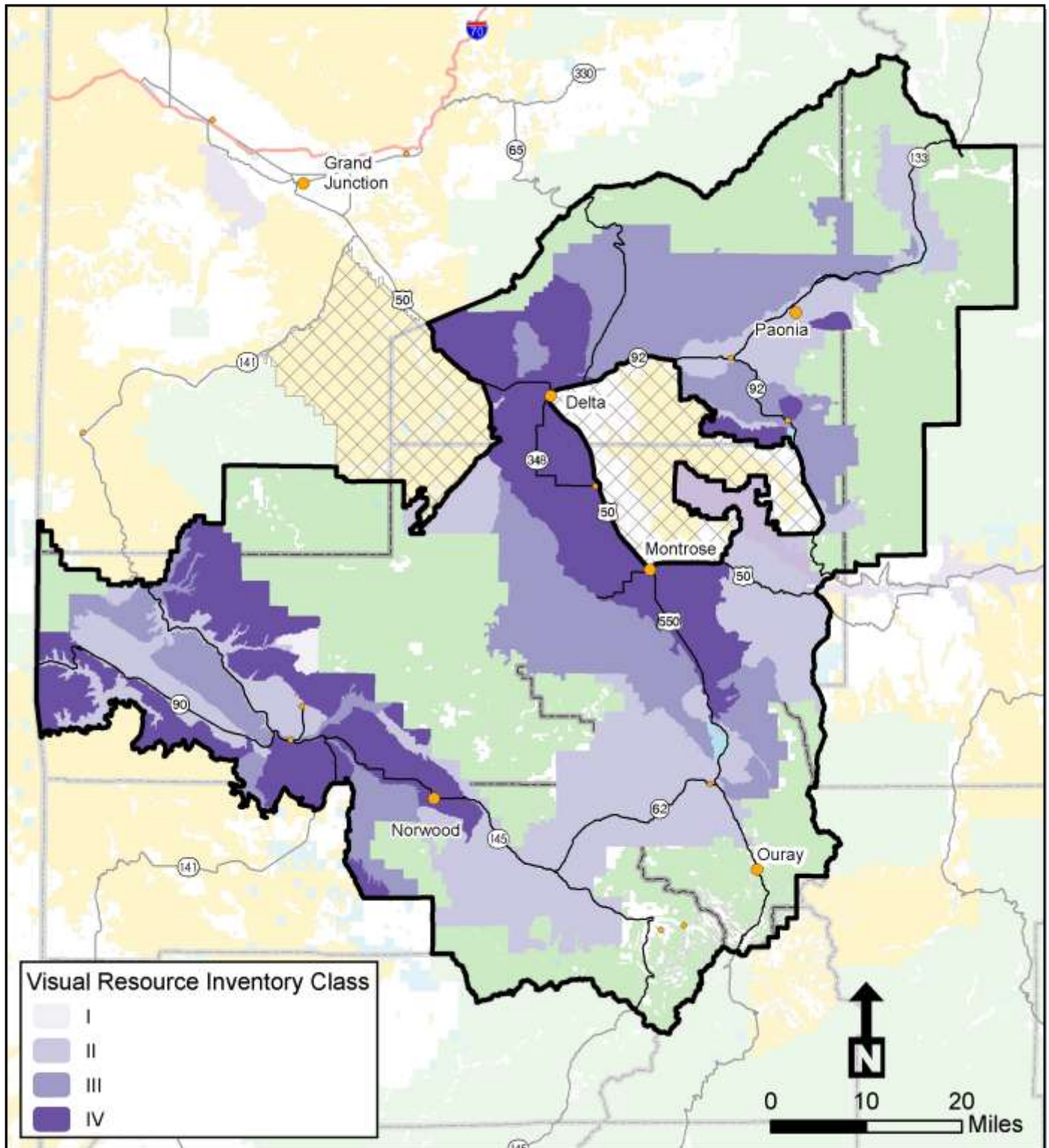


Figure 3-17: Visual Resource Inventory



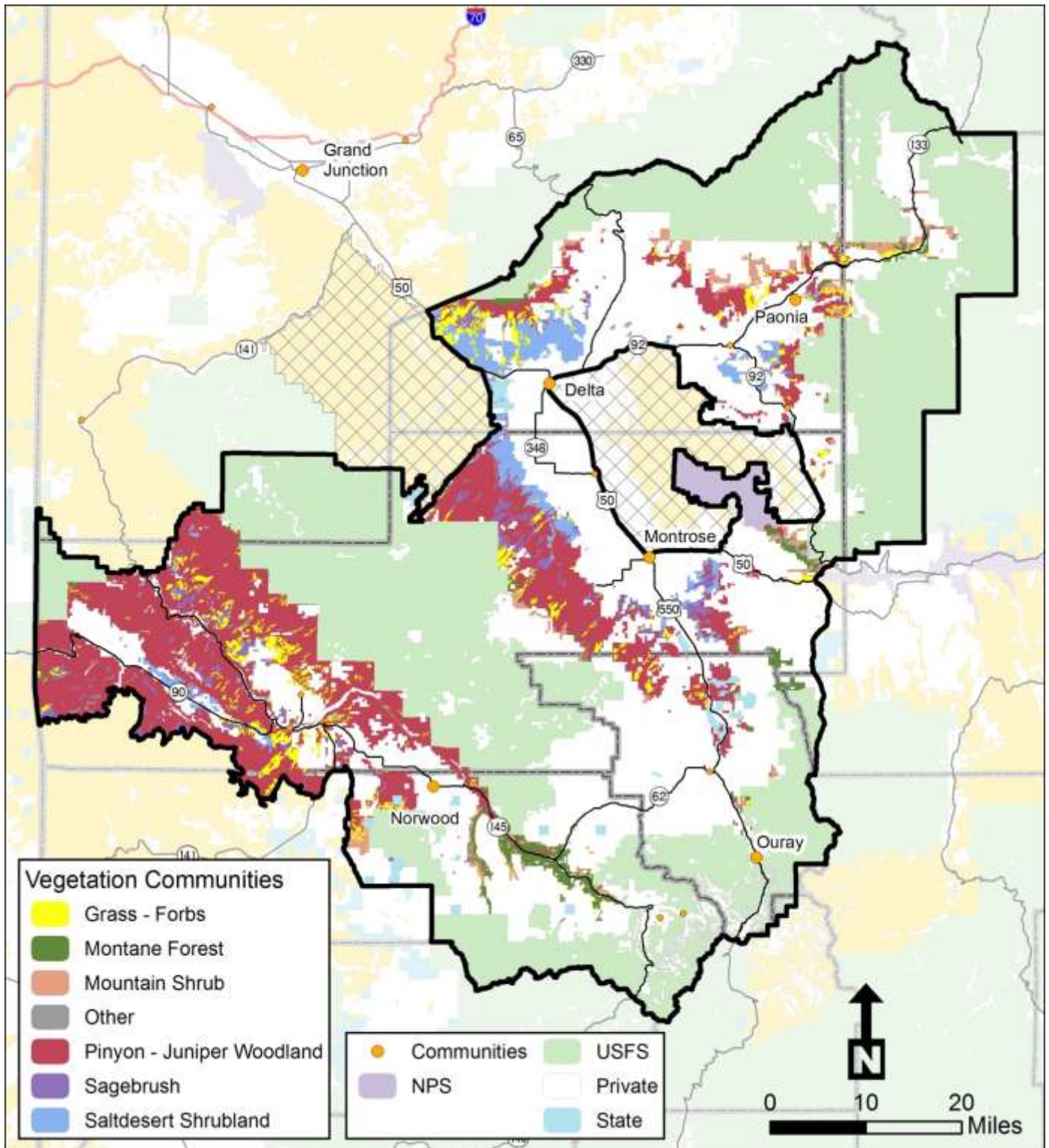


Figure 3-18: Vegetation Types

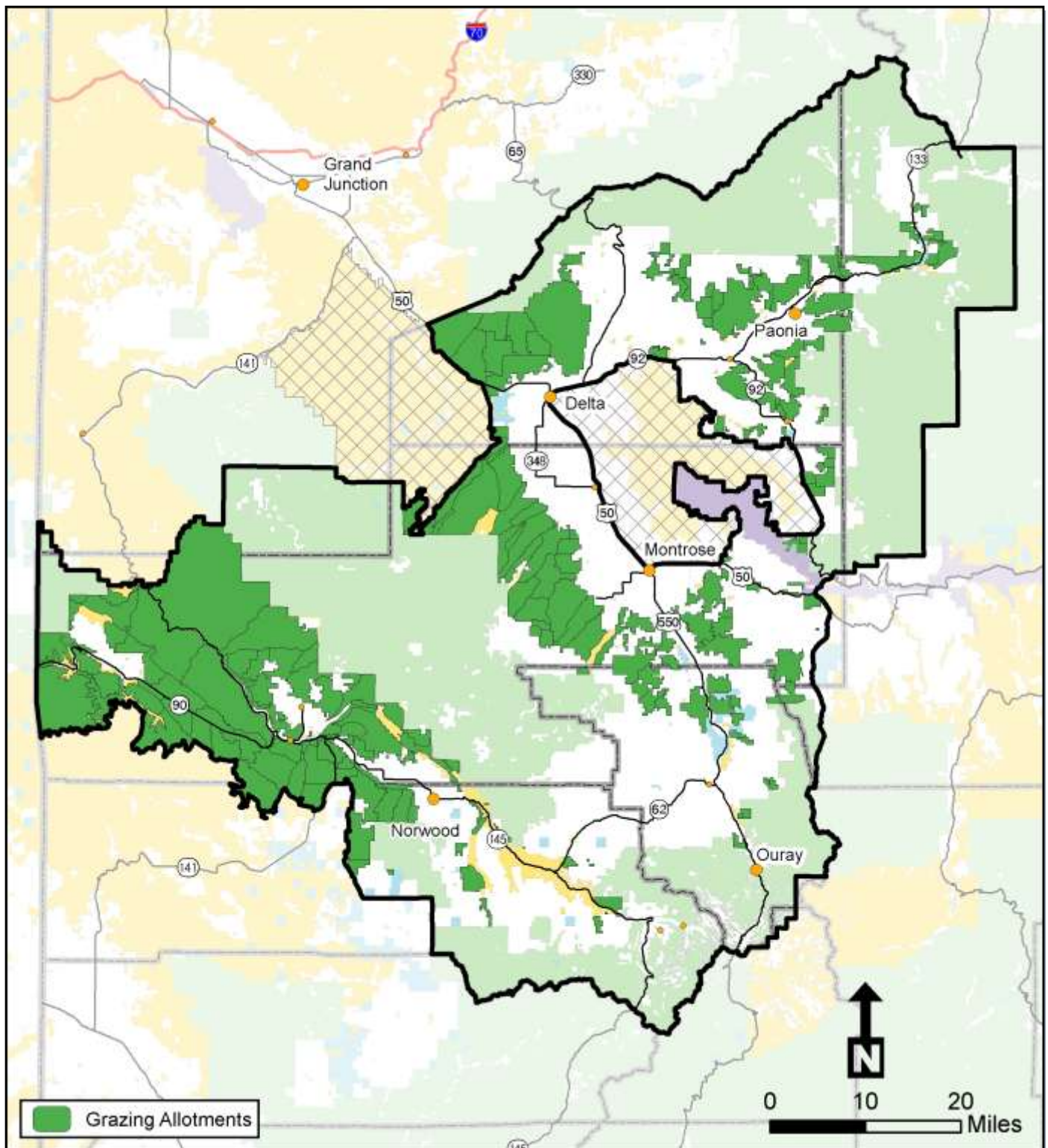


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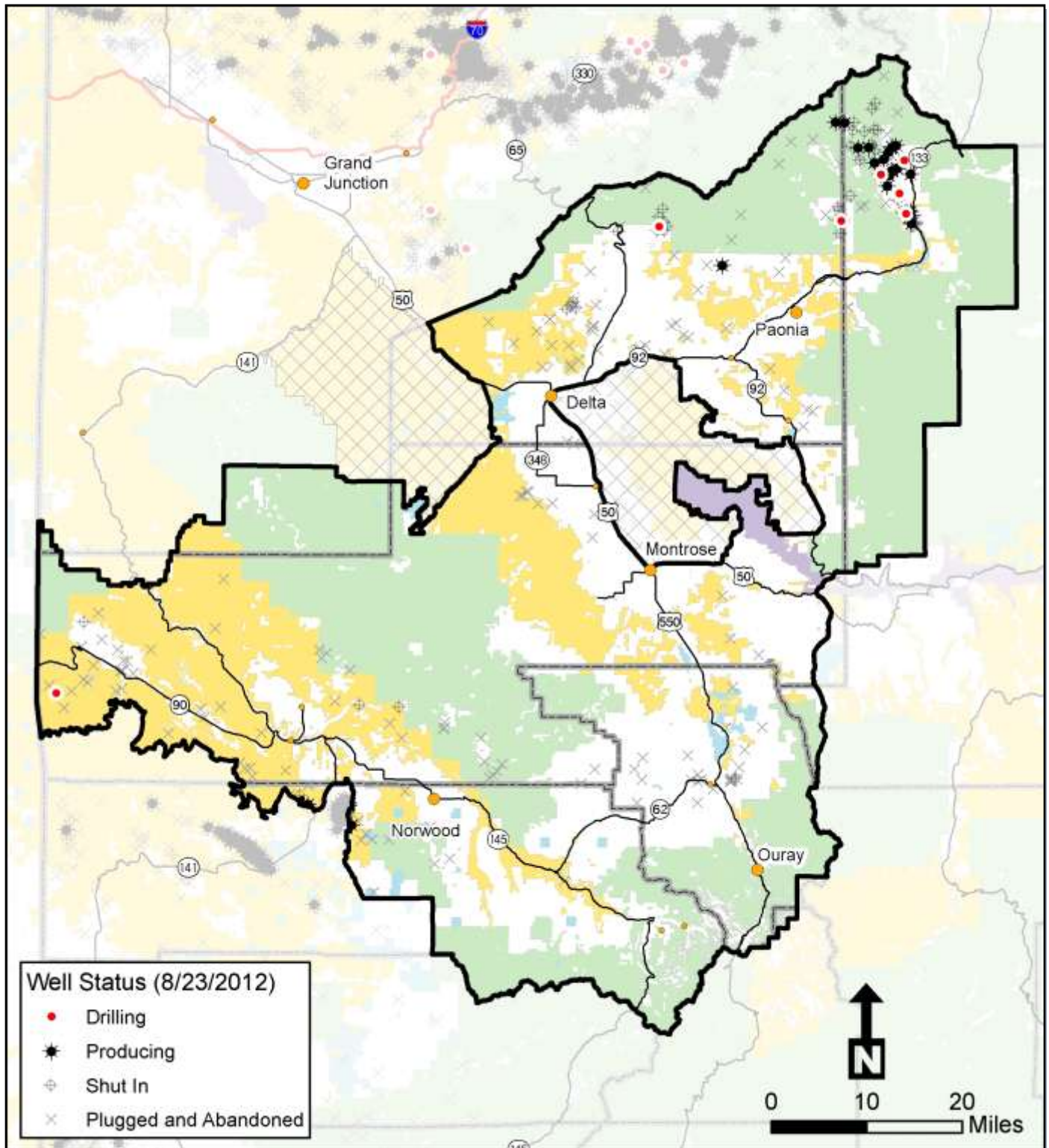


Figure 3-20: Oil and Gas Well Locations

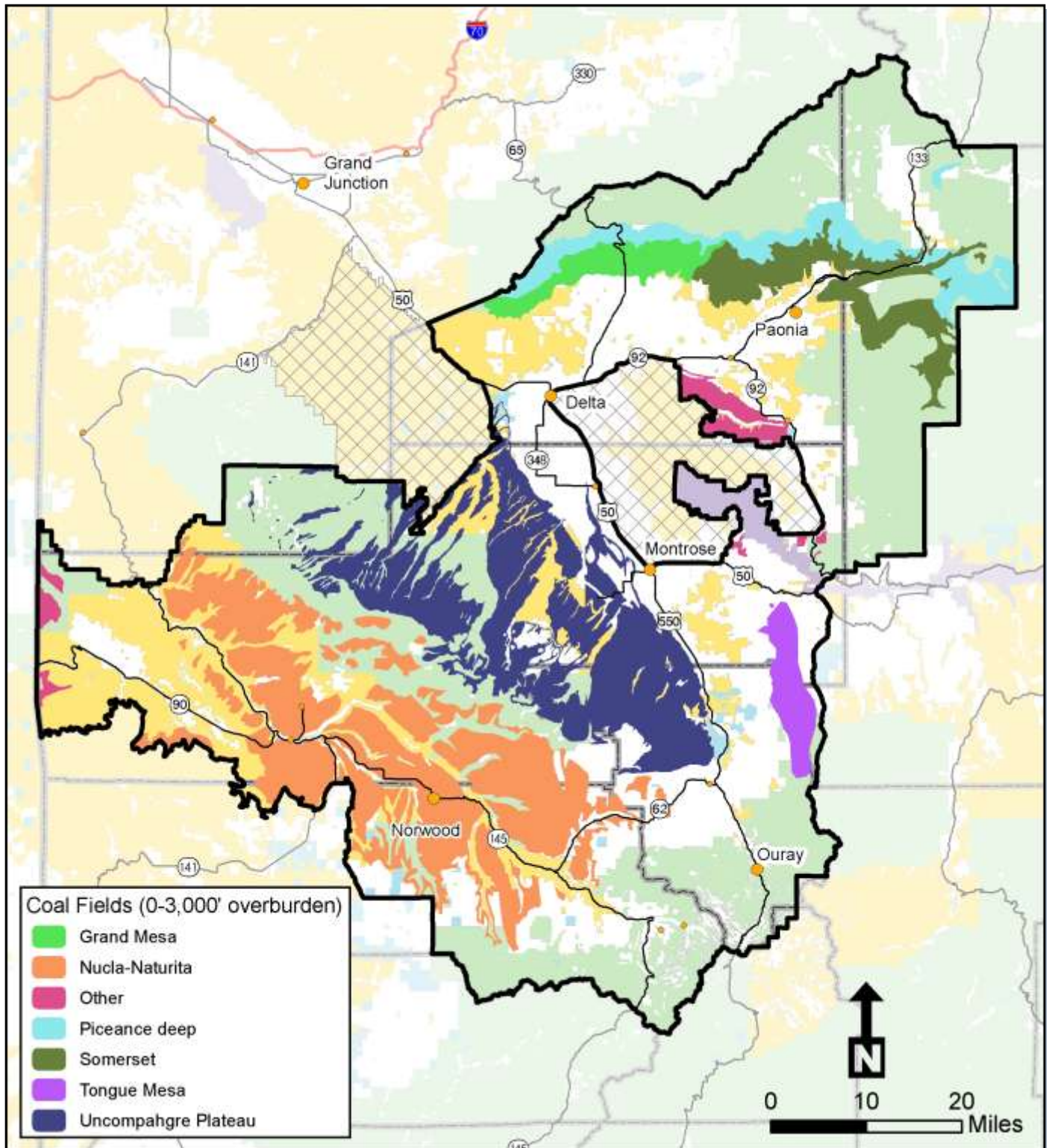


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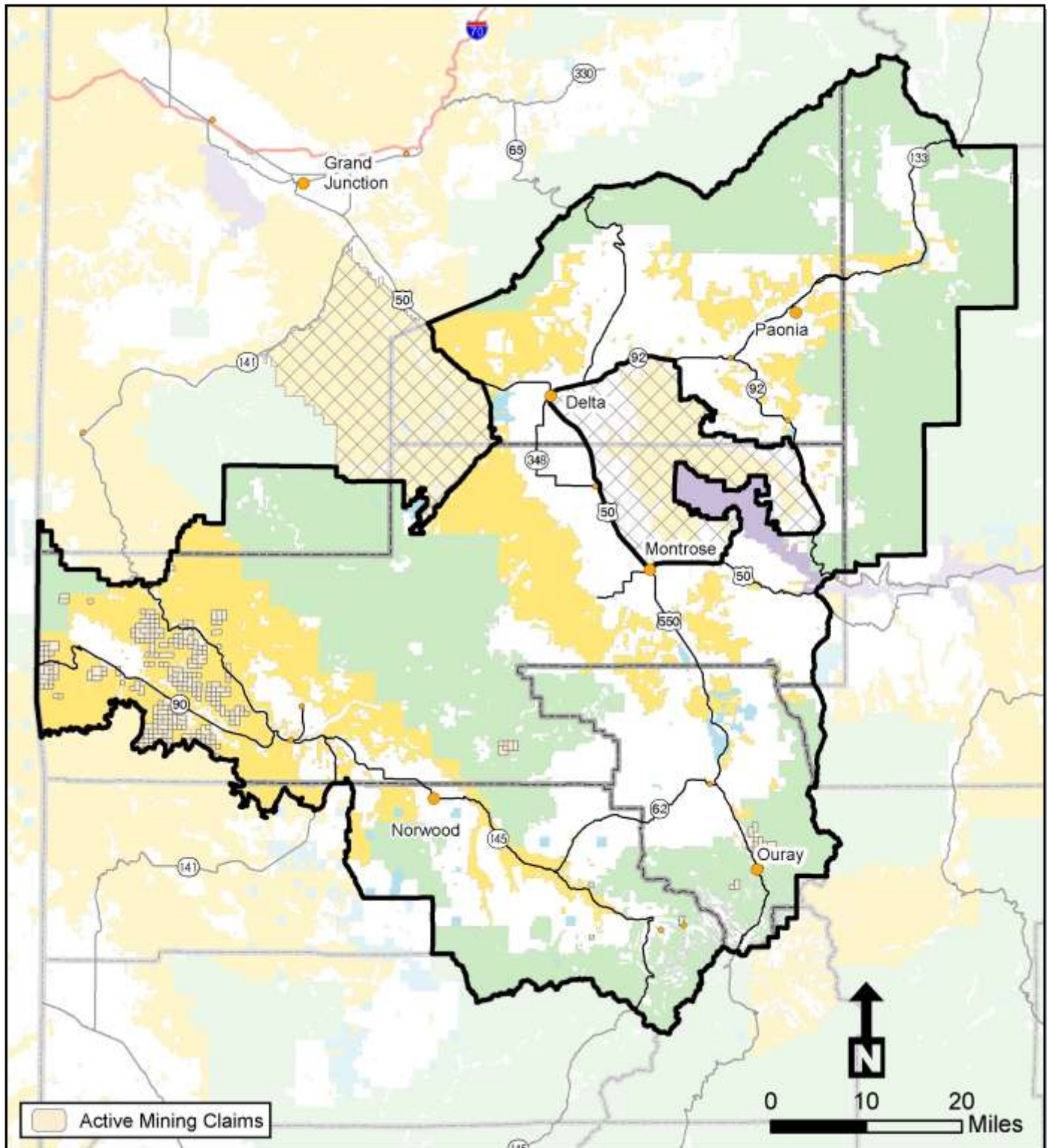


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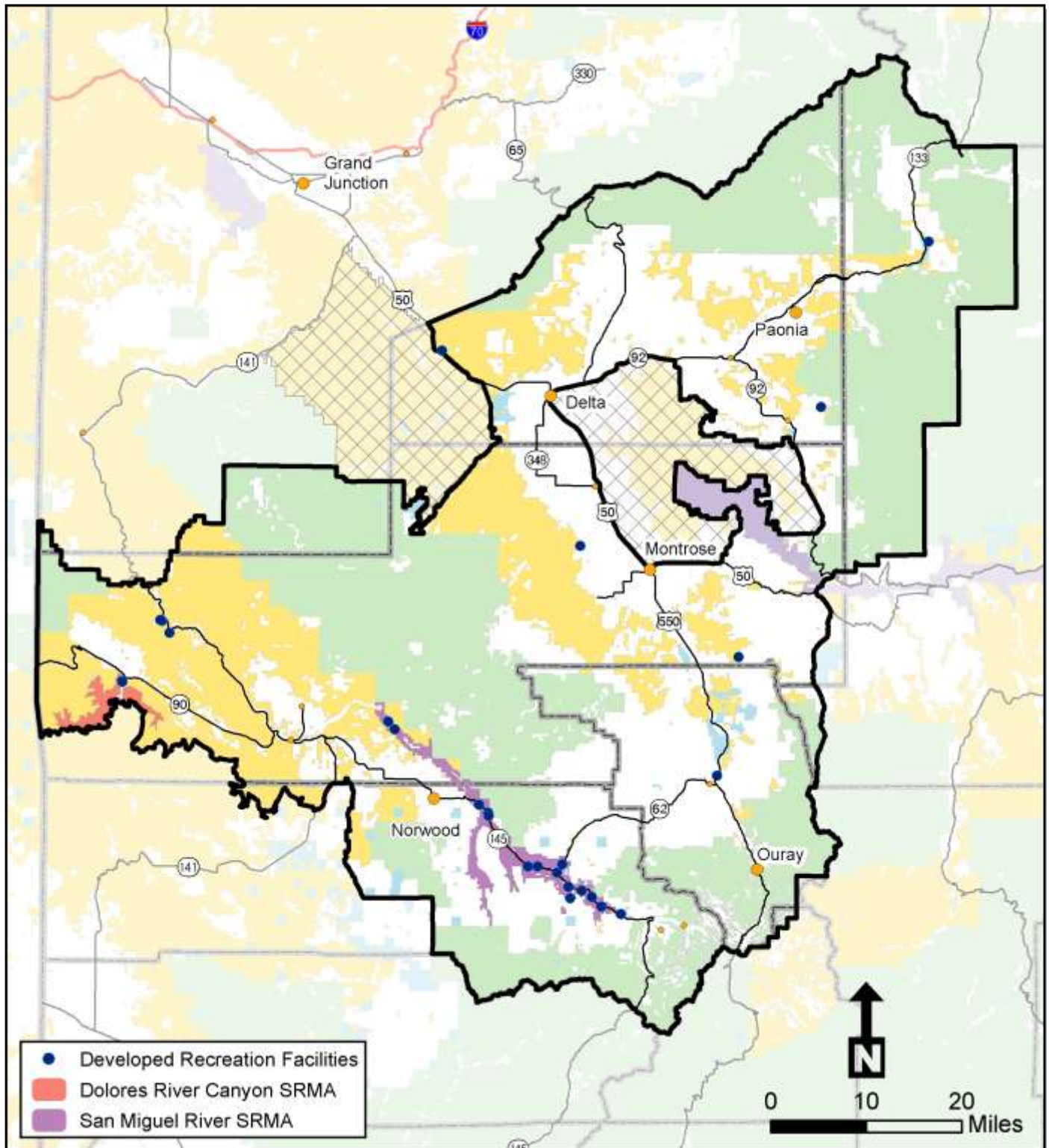


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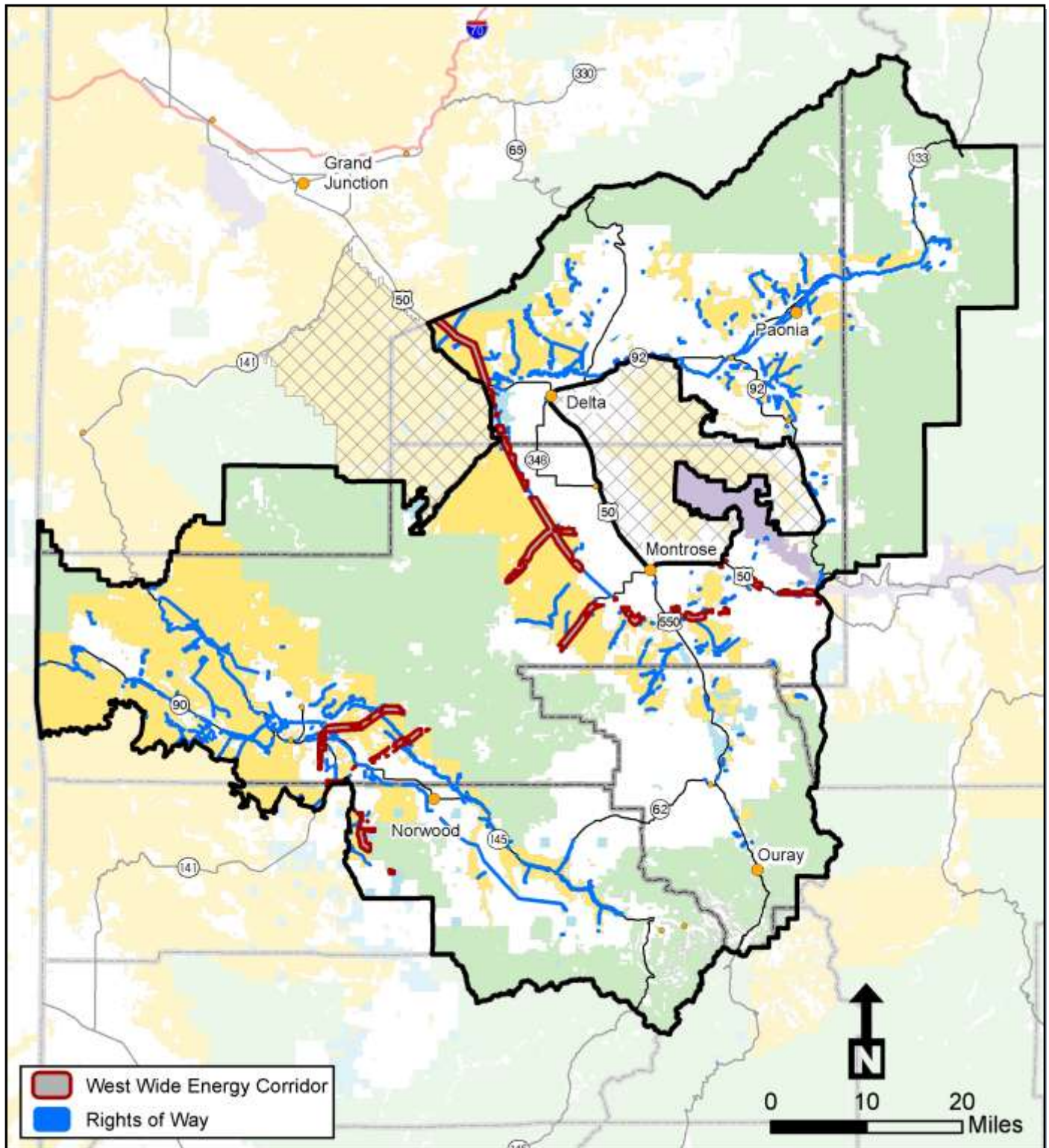


Figure 3-24: Right-of-Way Locations and Corridors



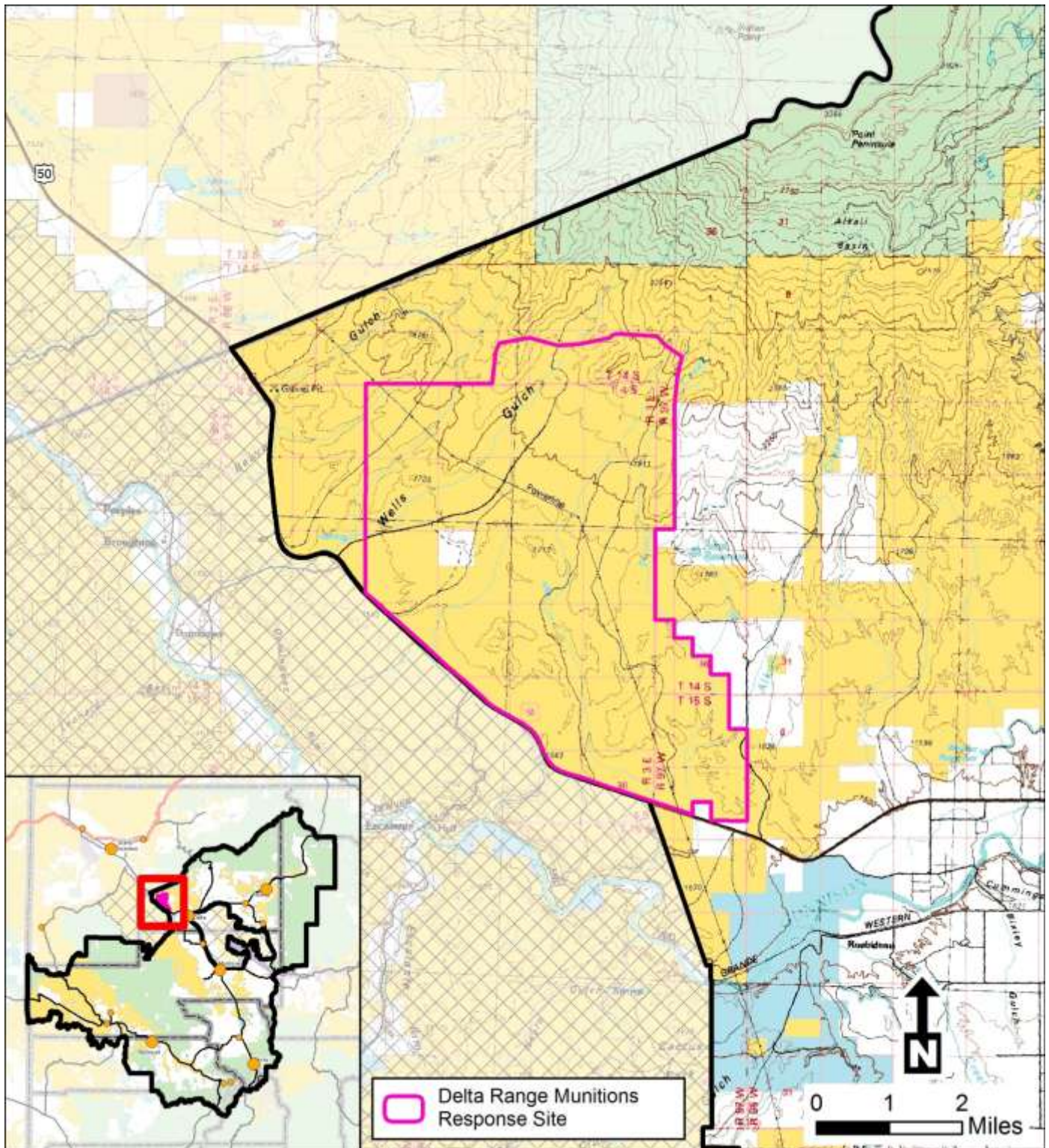


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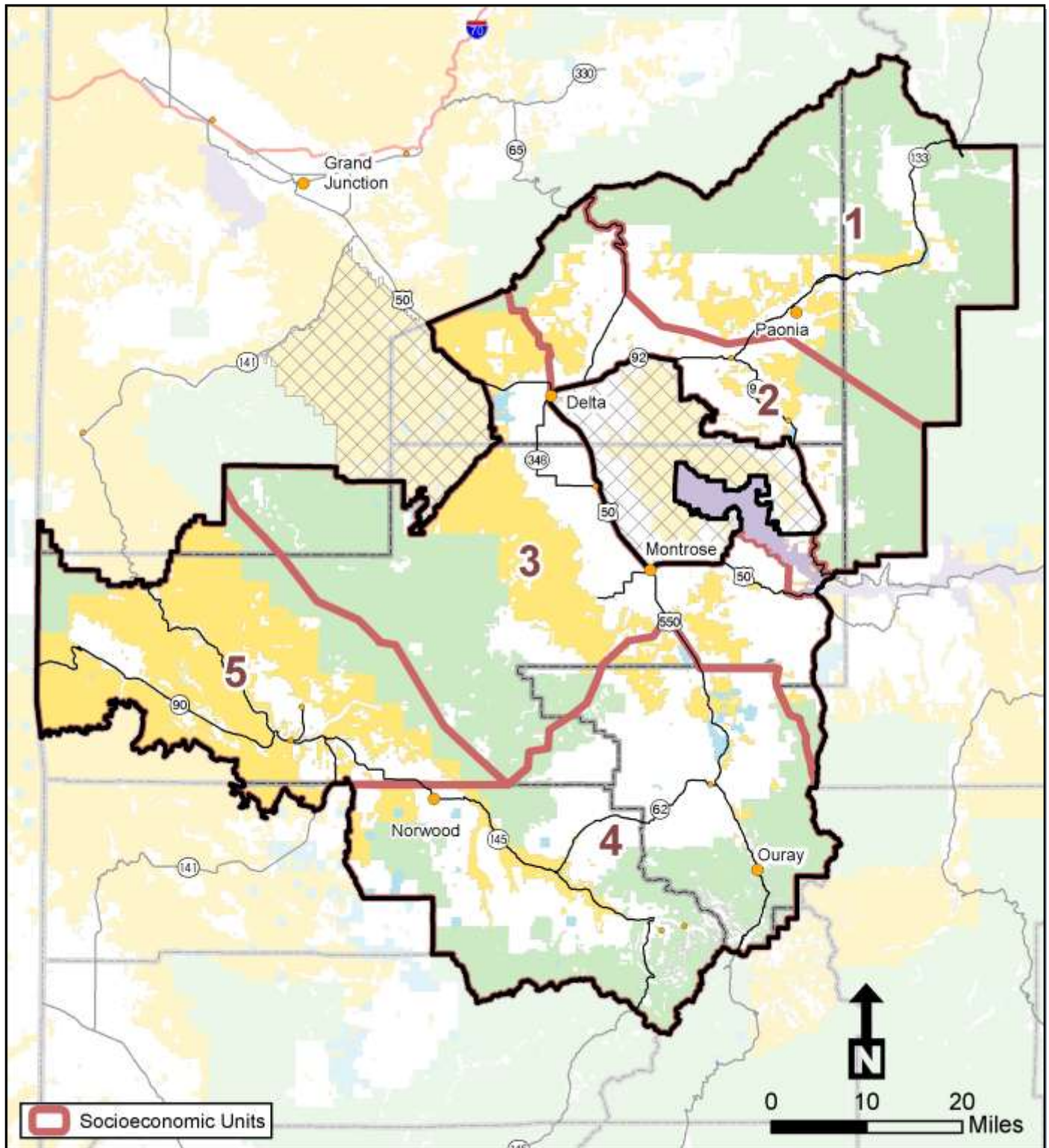


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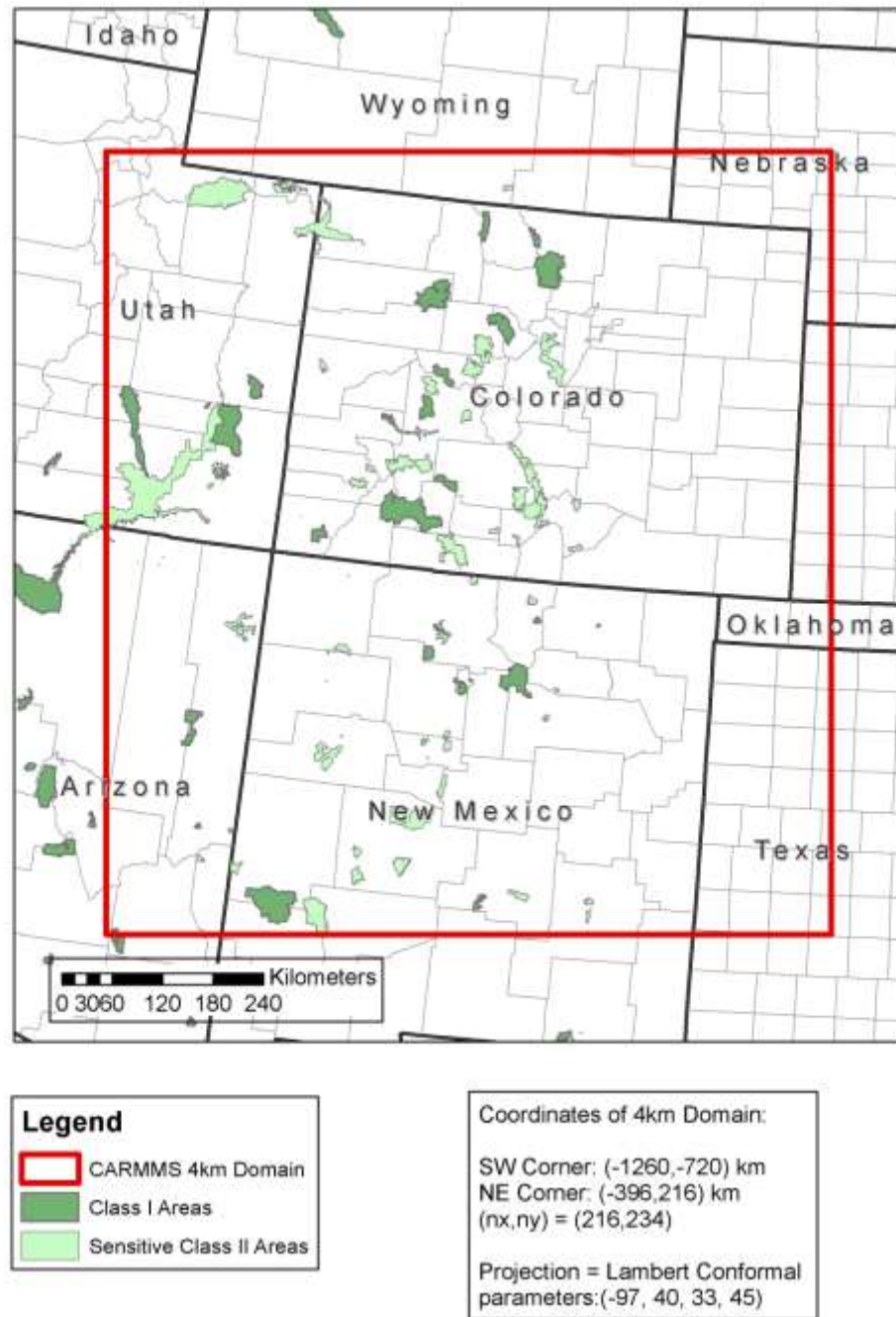


Figure 4-1: Modeling Domain Used in the Colorado Air Resource Management Modeling Study (CARMMS)



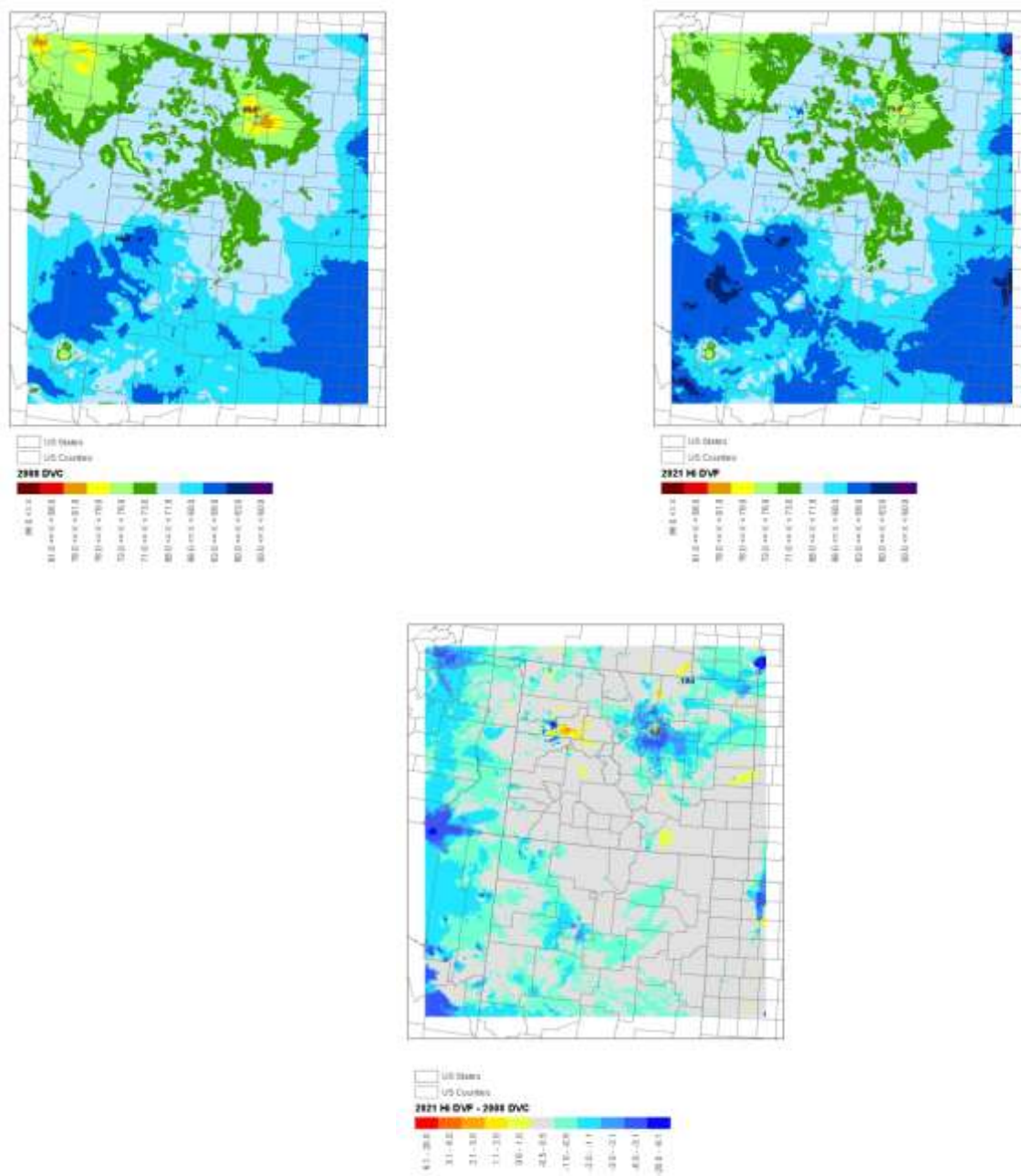


Figure 4-2: 2008 Ozone Current Year Design Value (top left), 2021 Ozone Future Year Design Value (top left), and 2021 – 2008 Ozone Future Year Design Value Differences (bottom) Calculated Using Modeled Attainment Test Software for the CARMMS 2021 High Development Scenario

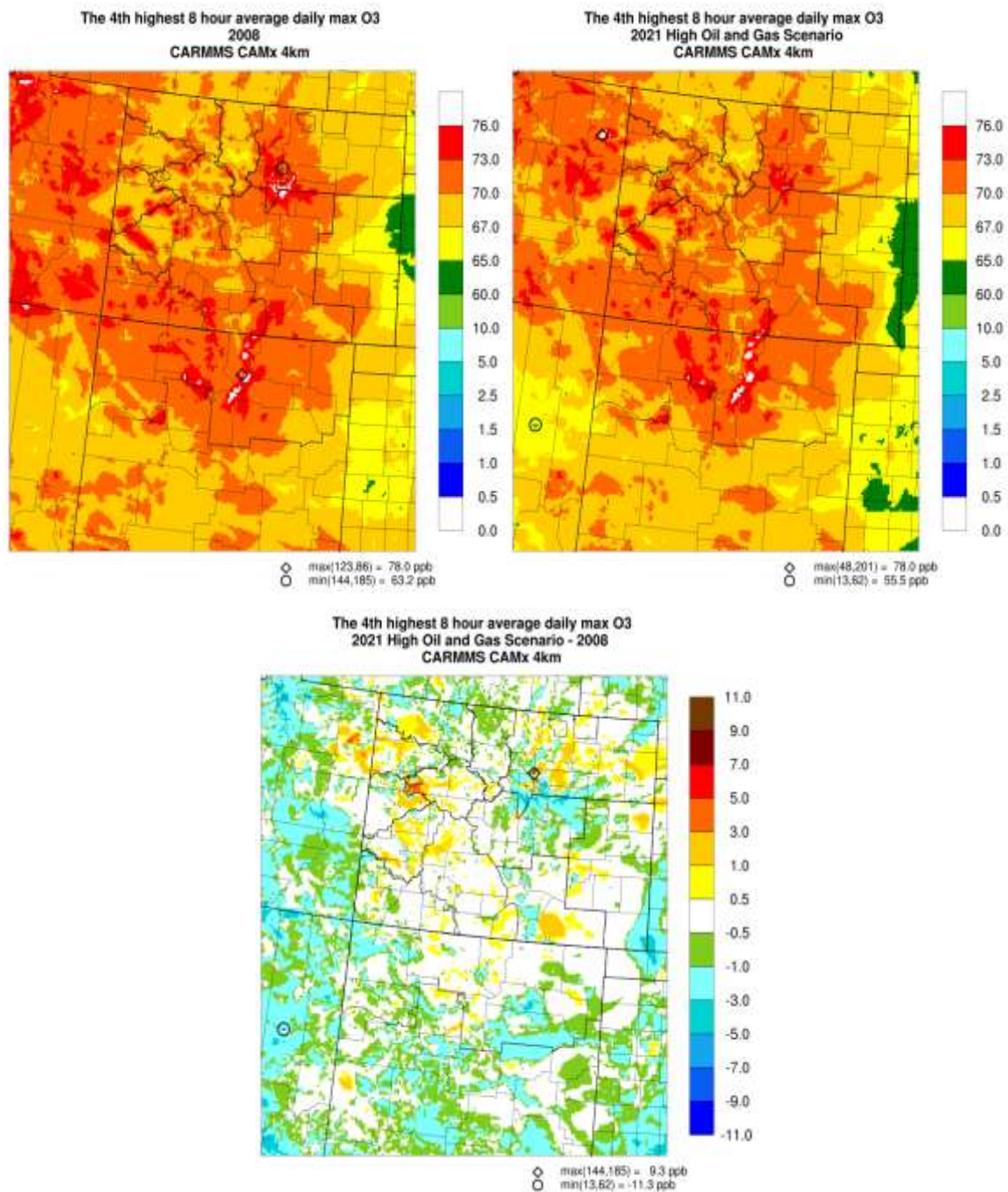


Figure 4-3: Fourth-highest Daily Maximum 8-hour Ozone Concentrations for the 2008 Base Case (top left), CARMMS 2021 High Development Scenario (top right), and 2021 Minus 2008 Differences (bottom)



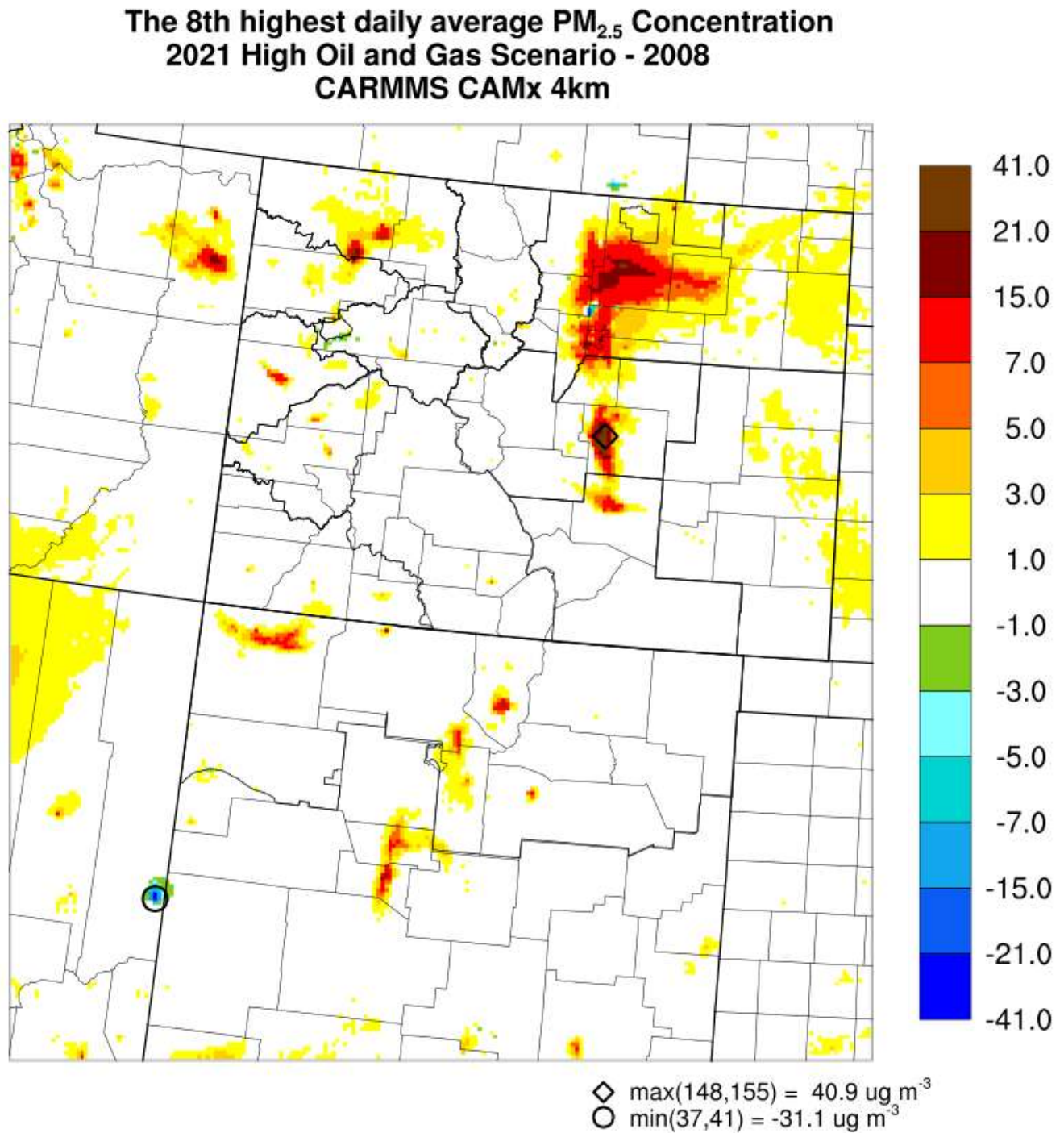


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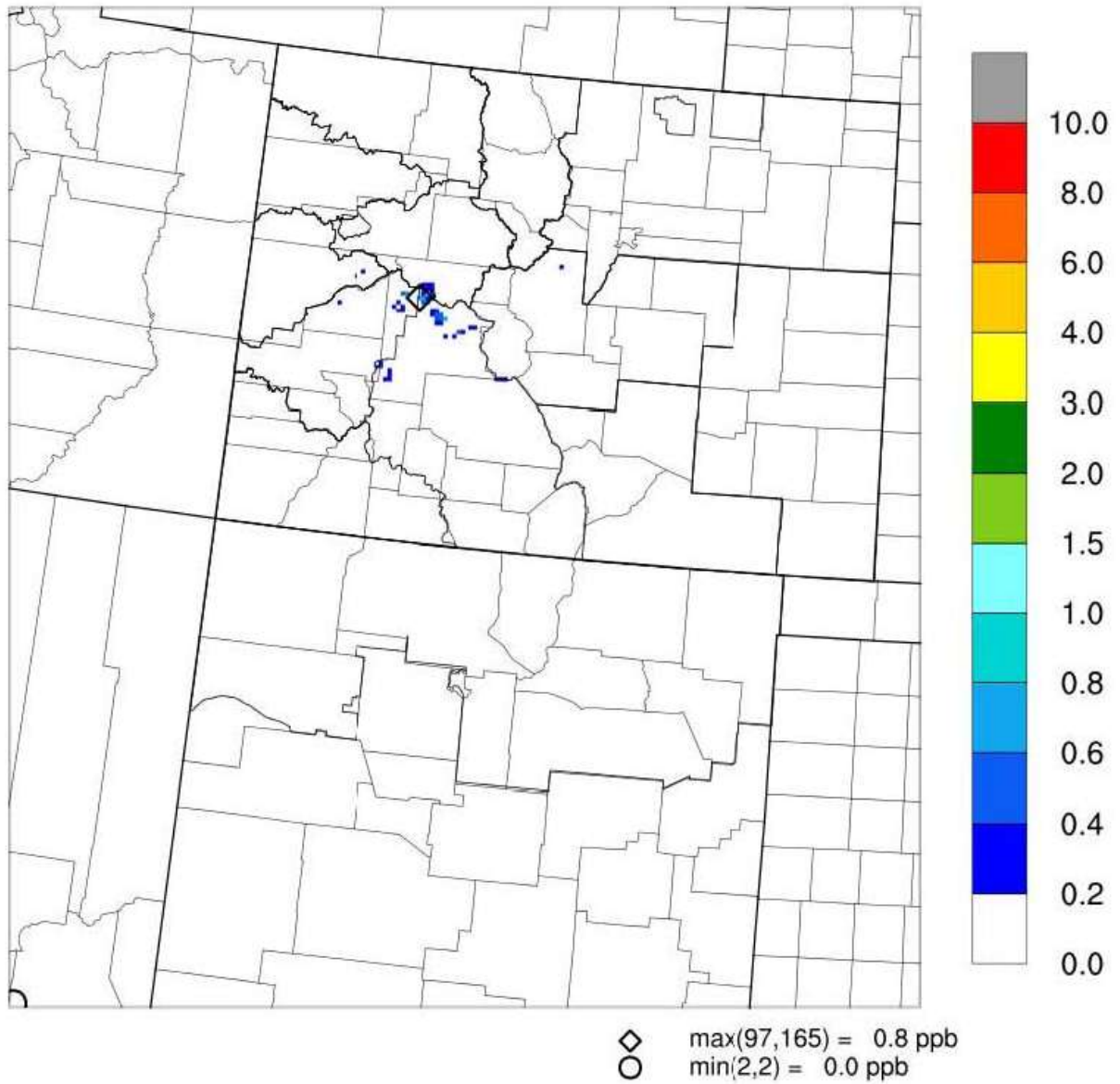


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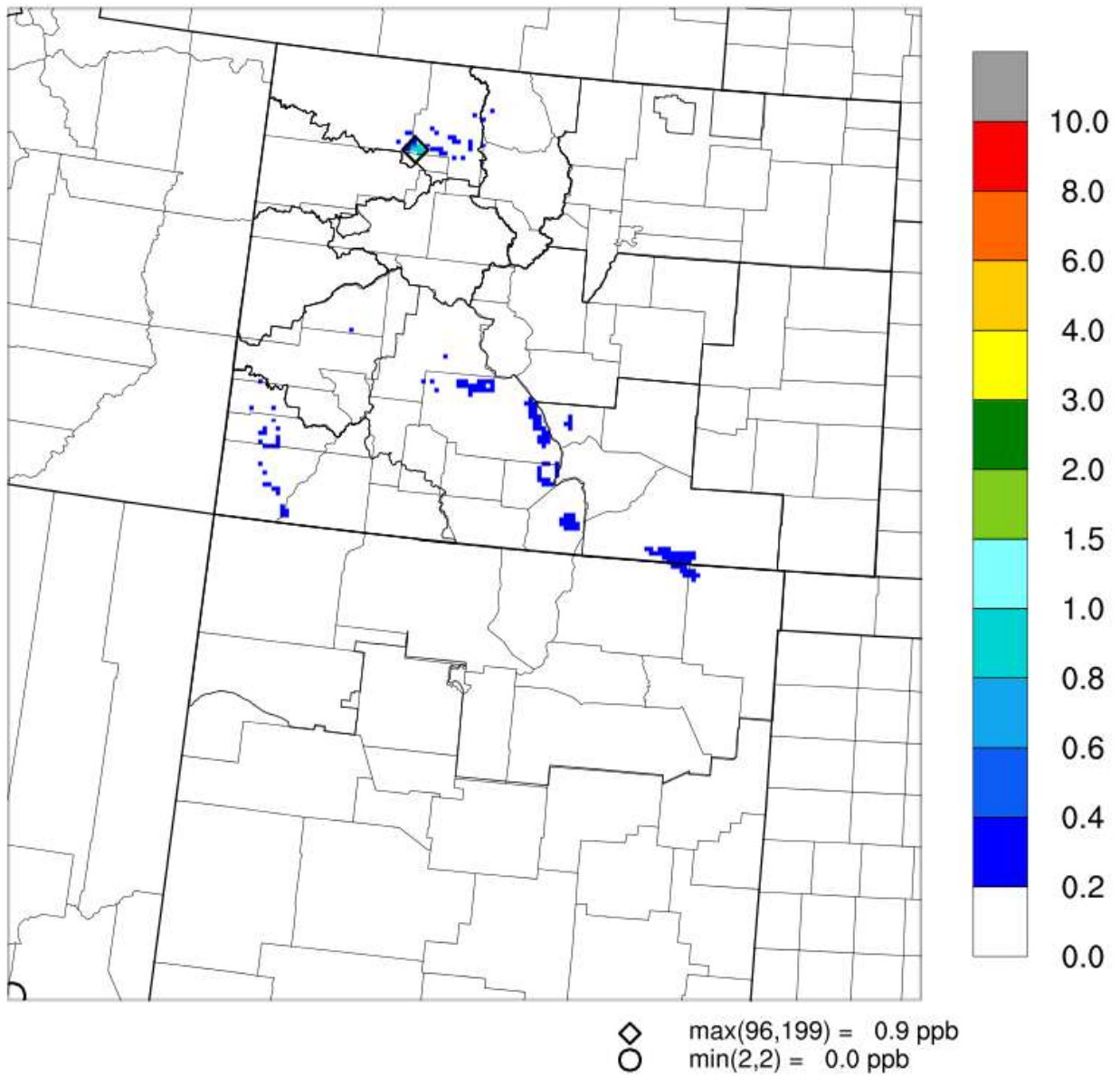


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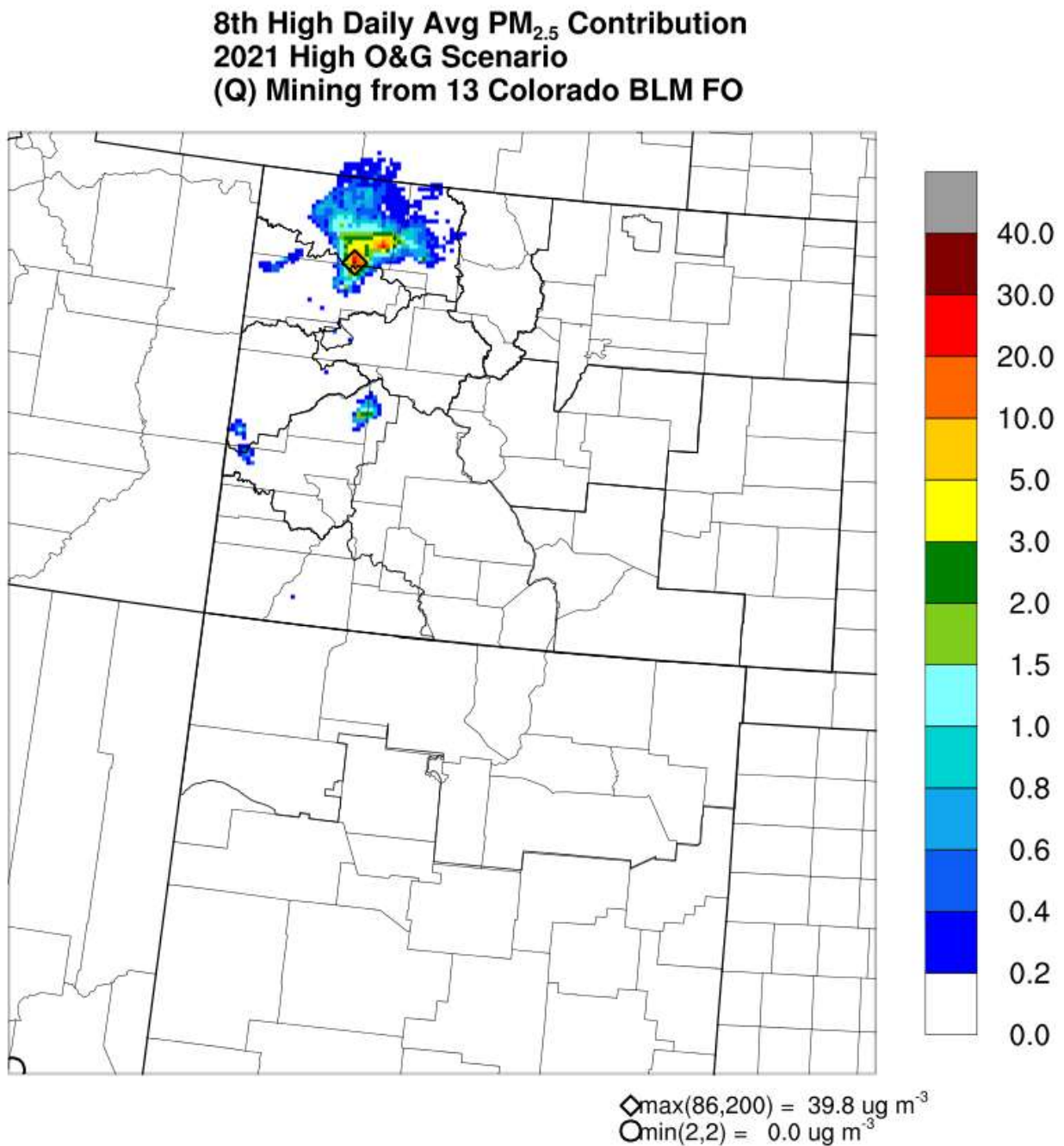


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# Appendix B

Restrictions Applicable to Fluid Minerals Leasing and  
Other Surface-disturbing Activities





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## **APPENDIX B**

# **RESTRICTIONS APPLICABLE TO FLUID MINERALS LEASING AND OTHER SURFACE-DISTURBING ACTIVITIES**

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This appendix lists by alternative the stipulations for fluid mineral leasing (e.g., oil, gas, and geothermal) referred to throughout this Draft RMP and EIS. Stipulations would also apply, where appropriate, to all surface-disturbing activities (and occupancy) associated with land use authorizations, permits, and leases issued on BLM-administered lands. The stipulations would not apply to activities and uses where they are contrary to laws, regulations, or specific program guidance, including operation of mining claims under the 1872 mining law.

No surface occupancy (NSO), controlled surface use (CSU), and timing limitation (TL) are stipulation decisions and apply to fluid mineral leasing and development of fluid mineral estate underlying BLM lands, privately owned lands, and state-owned lands, but not National Forest System lands. To lease minerals beneath surface lands administered by the US Department of Agriculture, Forest Service (Forest Service), the BLM must receive consent to lease from the Forest Service, and incorporate any accompanying stipulations required by forest land use plans or forest-wide programmatic leasing analyses.

Federal fluid mineral estate acres are greater than BLM surface acres. Within the planning area, the BLM administers 675,800 acres of surface estate and 240,230 acres of split-estate (i.e., where the surface rights are in private or state ownership and the mineral resources are publicly held and managed by the federal government [BLM]). Acreages reflect federal mineral estate overlain by BLM, private, and state-owned land. Acreages are calculated based on current information and may be adjusted in the future through plan maintenance as conditions warrant.

No ground disturbance (NGD), site-specific relocation (SSR), and TL are restriction decisions and apply to other surface-disturbing activities on BLM-administered surface lands.

Surface-disturbing activities are those that normally result in more than negligible (immeasurable, not readily noticeable) disturbance to vegetation and soils on public lands and accelerate the



natural erosive process. Surface disturbances could require reclamation and normally involve use and/or occupancy of the surface, causing disturbance to soils and vegetation. They include, but are not limited to: the use of mechanized earth-moving equipment; truck-mounted drilling, stationary drill rigs in unison, and geophysical exploration equipment off designated routes; off-road vehicle travel in areas designated as limited or closed to off-road vehicle use; construction of facilities such as range facilities and/or improvements; recreation sites; new road and trail construction; and use of pyrotechnics and explosives. Surface disturbance is not normally caused by casual-use activities. Activities that are not considered surface-disturbing include, but are not limited to, livestock grazing, cross-country hiking or equestrian use, dispersed camping, installing signs, minimum impact filming, vehicular travel on designated routes, and general use of the land by wildlife.

## **B.1 DESCRIPTION OF STIPULATIONS APPLICABLE TO FLUID MINERAL LEASING**

**Tables B-2** through **B-4** provide details of the stipulations and protected resources by alternative. Three types of stipulations could be applied to fluid mineral leases: 1) no surface occupancy (NSO); 2) controlled surface use (CSU); and 3) timing limitation (TL). Although not a stipulation, areas that are closed to fluid mineral leasing are also detailed in **Table B-1**. In areas closed to leasing, the resource would not be available for exploration or development. All other areas not identified in **Table B-1** are open to fluid mineral leasing, subject to standard terms and conditions and NSO, CSU, or TL stipulations if applicable.

Lease stipulations and lease notices would be applied, as applicable, to all new leases and to expired leases that are reissued. On existing leases, the BLM would develop Conditions of Approval for Applications for Permit to Drill to achieve resource objectives of lease stipulations contained in this RMP. New development on existing leases must comply with current management direction. This direction is consistent with Interior Board of Land Appeals decisions (*Yates Petroleum Corp.*, 176 Interior Board of Land Appeals 144 [2008] and *William P. Maycock*, 180 Interior Board of Land Appeals 1 [2010]) that BLM has discretion to modify surface operations to add specific mitigation measures supported by site-specific NEPA analysis undertaken during the development phase on existing leases (BLM 2010q). Any additional mitigation measures would need to be justifiable, still provide for lease development, and be incorporated in a site-specific document.

Stipulations identified in Alternative A, current management, were developed in the 1989 Uncompahgre Basin RMP (BLM 1989a) and the 1991 Colorado Oil and Gas Development EIS (BLM 1991a), which amended the San Juan/San Miguel RMP, and are annotated as “existing” in italics in the “stipulations number” column of the tables.

### **B.1.1 Standard Terms and Conditions for Fluid Mineral Leasing**

Oil and gas development is subject to standard terms and conditions of the lease. Onshore Oil and Gas Order No. 1 (Onshore Oil and Gas Operations; Federal and Indian Oil and Gas Leases; Approval of Operations) regulations (43 CFR 3160) give the BLM the ability to relocate proposed operations up to 200 meters (656 feet) and prohibit surface-disturbing operations for a period not to exceed 60 days.

**B.1.2 No Surface Occupancy (NSO)**

Use or occupancy of the land surface for fluid mineral exploration or development and all activities associated with fluid mineral leasing (e.g., truck-mounted drilling, stationary drill rigs in unison, geophysical exploration equipment off designated routes, construction of wells and/or pads) are prohibited to protect identified resource values. Refer to **Table B-2**.

The NSO stipulation is a category of major constraints. NSO areas are open to fluid mineral leasing, but surface occupancy or surface-disturbing activities associated with fluid mineral leasing cannot be conducted on the surface of the land. Access to fluid mineral deposits would require directional drilling and/or drilling from outside the boundaries of the NSO area. This differs from areas identified as closed to leasing (NL) in which neither the surface area nor mineral estate is available for fluid mineral leasing.

**B.1.3 Controlled Surface Use (CSU)**

CSU is a category of moderate constraint stipulations that allows some use and occupancy of public land while protecting identified resources or values and is applicable to fluid mineral leasing and all activities associated with fluid mineral leasing (e.g., truck-mounted drilling, stationary drill rigs in unison, geophysical exploration equipment off designated routes, and construction of wells and/or pads). CSU areas are open to fluid mineral leasing but the stipulation allows the BLM to require special operational constraints, or the activity can be shifted more than 200 meters (656 feet) to protect the specified resource or value. Refer to **Table B-3**.

**B.1.4 Timing Limitations (TL)**

Areas identified for Timing Limitations (TL), a moderate constraint, are closed to fluid mineral exploration and development, surface-disturbing activities, and intensive human activity during identified time frames that may exceed 60 days. This stipulation does not apply to operation and basic maintenance activities, including associated vehicle travel, unless otherwise specified. Construction, drilling, completions, and other operations considered to be intensive in nature are not allowed. Intensive maintenance, such as workovers on wells, is not permitted. Administrative activities are allowed at the discretion of the BLM Authorized Officer. Refer to **Table B-4**.

**B.1.5 Lease Notice (LN)**

A Lease notice (LN) provides more-detailed information concerning limitations that already exist in law, lease terms, regulations, or operational orders. A lease notice also addresses special items that lessees should consider when planning operations but does not impose additional restrictions. Lease notices are not an RMP-level decision and new lease notices may be added to fluid mineral leases at the time of sale. Lease notices apply only to leasable minerals (e.g., oil, gas, geothermal) and not to other types of leases, such as livestock grazing or coal leases. Refer to **Table B-5**.

**B.1.6 Condition of Approval (COA)**

Conditions of Approval are conditions or provisions (requirements) under which an Application for Permit to Drill is approved, after a lease is issued. Conditions of Approval are based on site-specific analysis and are designed to minimize, mitigate, or prevent impacts on resource values



or other uses of public lands. The application of a particular Condition of Approval is not an RMP-level decision.

### **B.1.7 Project Mitigation and Monitoring**

Stipulations are designed to provide resource-specific protections. Permit holders shall be responsible for the monitoring and reporting deemed necessary to document and maintain mandated protective measures. Also, the BLM retains the right to modify the operations of all surface and other disturbance activities caused by the presence of humans and to require additional specific or specialized mitigation following the submission of a detailed plan of development or other project proposal, a monitoring report, and an environmental analysis of such.

## **B.2 DESCRIPTION OF RESTRICTIONS APPLICABLE TO SURFACE-DISTURBING ACTIVITIES**

**Tables B-6** and **B-7** provide details of the restrictions and protected resources by alternative. Three types of restrictions could be applied to land use authorizations: 1) no ground disturbance (NGD); 2) site-specific relocation (SSR); and 3) timing limitation (TL). **Section B.2.1**, No Ground Disturbance (NGD), and **Section B.2.2**, Site-specific Relocation (SSR), list actions and activities that are not subject to NGD and/or SSR.

Restrictions applicable to surface-disturbing activities apply to other activities besides fluid mineral leasing, including those conducted by the BLM. Because the BLM does not have jurisdiction over split-estate lands for surface-disturbing activities not related to fluid mineral leasing and development, NGD and SSR restrictions apply only to the 675,800 acres of BLM surface in the decision area.

### **B.2.1 No Ground Disturbance (NGD)**

Areas restricted by NGD are closed to all surface-disturbing activities. Activities that are not considered surface disturbing include, but are not limited to, livestock grazing, cross-country hiking or equestrian use, installing signs, minimum impact filming, vehicular travel on designated routes, and general use of the land by wildlife. Fire suppression activities using *minimum-impact suppression tactics* area allowed in areas with and NGD stipulation with approval from the BLM Authorized Officer.

An NGD stipulation cannot be applied to fluid minerals leasing. Fluid minerals are subject to NSO and CSU.

An NGD stipulation cannot be applied to operations conducted under the 1872 Mining Law (i.e., locatable mineral development) without a withdrawal. A withdrawal is not considered a land use planning decision because it must be approved by the Secretary of Interior. Therefore, unless withdrawn, areas identified as NGD are open to operations conducted under the mining laws subject only to TL and SSR restrictions that are consistent with the rights granted under the mining laws.

In addition, the following actions or activities are not subject to the NGD stipulation because specific laws and program terminology constrain them. However, these actions or activities may be subject to SSR or TL restrictions:

- Right-of-way (ROW) location: instead of identifying areas as NGD, areas can be identified as “ROW exclusion” areas.
- Coal leasing: instead of identifying areas as NGD, areas can be identified as open or closed to coal leasing.
- Nonenergy solid mineral leasing: instead of identifying areas as NGD, areas can be identified as open or closed to nonenergy solid mineral leasing.
- Mineral material disposal: instead of identifying areas as NGD, areas can be identified as open or closed to mineral material disposal.

### **B.2.2 Site-specific Relocation (SSR)**

An SSR restriction is similar to a CSU restriction in that it allows some use and occupancy of BLM-administered lands while protecting identified resources or values. SSR areas are potentially open to surface-disturbing activities but the restriction allows the BLM to require special constraints, or the activity can be shifted to protect the specified resource or value. Activities that are not considered surface disturbing include, but are not limited to, livestock grazing, cross-country hiking or equestrian use, installing signs, minimum impact filming, vehicular travel on designated routes, and general use of the land by wildlife.

Right-of-way location authorizations are not subject to the SSR restriction because it is constrained in other ways. Instead of identifying areas as SSR, areas can be identified as “ROW avoidance” areas. The action may be subject to TL stipulations.

An SSR stipulation cannot be applied to fluid mineral leasing. Fluid minerals are subject to CSU and NSO stipulations.

### **B.2.3 Timing Limitations (TL)**

The timing limitation (TL) restriction for surface-disturbing activities is the same as the TL stipulation for fluid mineral leasing and associated activities. Refer to **Section B.1.4**, Timing Limitations (TL).

## **B.3 EXCEPTIONS, MODIFICATIONS, AND WAIVERS APPLICABLE TO FLUID MINERAL LEASING AND OTHER SURFACE-DISTURBING ACTIVITIES**

Stipulations could be excepted, modified, or waived by the BLM Authorized Officer. Exceptions, modifications, and waivers provide a viable and effective means of applying adaptive management techniques to fluid mineral leasing or other surface-disturbing activities.

### **B.3.1 Standard Exception, Modification, and Waiver**

The standard exception, modification, and waiver apply to all NSOs, CSUs, TLs, NGDs, and SSRs. In the following paragraphs, “leasehold” refers to fluid mineral leases, and “project” or “project area” refers to other surface-disturbing projects, as described in Section B.2.

An exception is a one-time exemption for a particular site within the leasehold or project area; exceptions are determined on a case-by-case basis; the stipulation continues to apply to all other sites within the leasehold or project area. The BLM Authorized Officer may grant an exception to a stipulation if it is determined that the factors leading to its inclusion in the lease or project have changed sufficiently such that: 1) the protection provided by the stipulation is no



longer justified or necessary to meet resource objectives established in the RMP; or 2) proposed operations would not cause unacceptable impacts. The BLM Authorized Officer may require additional plans of development, surveys, mitigation proposals, or environmental analysis, and may consult with other government agencies and/or the public in order to make this determination.

A modification is a change to the provisions of a lease stipulation or project either temporarily or for the lease term or length of the project. Depending on the specific modification, the stipulation may or may not apply to all sites within the leasehold or project area to which the restrictive criteria are applied. The BLM Authorized Officer may modify a stipulation or the area subject to the stipulation if it is determined that the factors leading to its inclusion in the lease or project area have changed sufficiently. The BLM Authorized Officer may modify a stipulation as a result of new information if: 1) the protection provided by the stipulation is no longer justified or necessary to meet resource objectives established in the RMP; 2) the protection provided by the stipulation is no longer sufficient to meet resource objectives established in the RMP; or 3) proposed operations would not cause unacceptable impacts. The BLM Authorized Officer may require additional plans of development, surveys, mitigation proposals, or environmental analysis, and may consult with other government agencies and/or the public in order to make this determination.

A waiver is a permanent exemption from a lease or project stipulation. When a waiver is granted, the stipulation no longer applies anywhere within the leasehold or project area. The BLM Authorized Officer may waive a stipulation if it is determined that the factors leading to its inclusion in the lease or project no longer exist. The BLM Authorized Officer may require additional plans of development, surveys, mitigation proposals, or environmental analysis, and may be required to consult with other government agencies and/or the public in order to make this determination.

The environmental analysis document prepared for site-specific proposals such as oil and gas development (e.g., Applications for Permit to Drill and Sundry Notices) or other surface projects also needs to include and address any proposal to except, modify, or waive a surface stipulation.

**Table B-1**  
**Areas Closed to Fluid Mineral Leasing (NL)**

Allocation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Description	Alternative			
		A	B	C	D
	<p>The following No Lease areas are nondiscretionary because they are closed to fluid mineral leasing per congressional mandate or bureau policy (44,220 acres):</p> <ul style="list-style-type: none"> <li>NL-17: Tabeguache Area (Colorado Wilderness Act of 1993)</li> <li>NL-18: WSAs (BLM Manual 6330)</li> </ul> <p>The remaining No Lease areas identified in this table are discretionary because they are decisions made in this RMP.</p>	•	•	•	•
	Soils and Water				
<b>NL-1</b> <i>Selenium Soils</i> BLM Surface: 12,660 acres Split-estate: 3,600 acres	<p>Close to oil and gas leasing and geophysical exploration soils with high and very high potential for selenium loading.</p> <p><b>PURPOSE:</b> Proactively protect soils that are sensitive to erosion and movement of selenium. To maintain soil productivity and ground cover and to minimize soil loss in order to protect downstream water sources from additional sediment and selenium inputs.</p>		B.1		
<b>NL-2/NGD-3</b> <i>Hydrology River</i> BLM Surface: 26,990 acres Split-estate: 1,060 acres	<p>Close to fluid mineral leasing and geophysical exploration, and prohibit surface-disturbing activities, within 402 meters (1,320 feet) the ordinary high-water mark (bank-full stage) or within 100 meters (328 feet) of the 100-year floodplain (whichever is greatest) on the following major rivers: Gunnison, North Fork Gunnison, San Miguel, Uncompahgre, and Dolores Rivers.</p> <p><b>PURPOSE:</b> To protect the river corridor that provide: a) water quality/filtering values; b) important riparian values; c) special status fish and wildlife species habitat; d) waterfowl and shorebird production values; e) valuable amphibian habitat; and f) high scenic and recreation values of these major rivers.</p>		•		
<b>NL-3</b> <i>Major River Corridors</i> BLM Surface: 5,580 acres Split-estate: 2,420 acres	<p>Close to oil and gas leasing and geophysical exploration within 805 meters (2,640 feet) (0.50-mile) of the North Fork of the Gunnison and Smith Fork of the Gunnison Rivers.</p> <p><b>PURPOSE:</b> To protect the river corridor against water contamination and for high scenic and recreation values of these major rivers.</p>		B.1		



**Table B-1**  
**Areas Closed to Fluid Mineral Leasing (NL)**

Allocation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Description	Alternative			
		A	B	C	D
<b>NL-4</b> Water Bodies No Data	Close to oil and gas leasing and geophysical exploration within 805 meters (2,640 feet) (0.50-mile) of lakes, ponds, naturally occurring wetlands, and impounding reservoirs (not including stock ponds for livestock).  <b>PURPOSE:</b> To protect ecological values, water quality, aquatic value, recreational attractions, water storage, and flood control.		B.1		
<b>NL-5</b> Water Ways BLM Surface: 39,400 acres Split-estate: 43,410 acres	Close to oil and gas leasing and geophysical exploration within 805 meters (2,640 feet) (0.50-mile) of all streams, watercourses, and waterways.  <b>PURPOSE:</b> To protect ecological values, water quality, aquatic value, and recreational attractions.		B.1		
<b>NL-6</b> Public Water Supplies BLM Surface: 13,760 acres Split-estate: 4,590 acres	Close to fluid mineral leasing and geophysical exploration within 2,640 feet of either side of a classified, surface water supply, stream segment (as measured from the average high water mark) for a distance of 5 miles upstream of a public water supply intake classified by the State as "Water Supply" and within a 2,640-foot buffer of all Public Water Supplies that use a groundwater well or spring.  If public water providers develop source water protection plans, apply this "No Lease" to cover the appropriate designated area in the protection plan.  <b>PURPOSE:</b> Protecting public water supplies, water quality, aquatic habitat and human health.		•		
<b>NL-7</b> Public Water Supplies BLM Surface: 320 acres Split-estate: 150 acres	Close to oil and gas leasing and geophysical exploration within 402 meters (1,320 feet) (0.25-mile) of a municipal water supply (classified surface water-supply stream segment), including intakes, and within a 402-meter (1,320-foot) (0.25-mile) buffer of all public water supplies that use a groundwater well or spring.  <b>PURPOSE:</b> To protect public water supplies, water quality, aquatic habitat, and human health.		B.1		

**Table B-1**  
**Areas Closed to Fluid Mineral Leasing (NL)**

Allocation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Description	Alternative			
		A	B	C	D
<b>NL-8</b> <i>Public Water Supplies</i> BLM Surface: 4,290 acres Split-estate: 1,530 acres	<p>Close to fluid mineral leasing and geophysical exploration 1,000 feet on either side of a classified, surface water supply, stream segment (as measured from the average high water) for a distance of 5 miles upstream of a public water supply intake classified by the State as a “Water Supply”; and within a 1,000-foot buffer of all Public Water Supplies that use a groundwater well or spring.</p> <p>If public water providers develop source water protection plans, apply this “No Lease” to cover the appropriate designated area in the protection plan.</p> <p><b>PURPOSE:</b> Protecting public water supplies, water quality, aquatic habitat and human health.</p>				•
<b>NL-9</b> <i>Domestic Water Wells and Private Water Systems</i> BLM Surface: 2,300 acres Split-estate: 4,500 acres	<p>Close to oil and gas leasing and geophysical exploration within 402 meters (1,320 feet) (0.25-mile) of all domestic water wells and private water systems, including ditches and domestic water decrees.</p> <p><b>PURPOSE:</b> To protect domestic water supplies, private water systems, and agriculture.</p>		B.1		
	Vegetation				
<b>NL-4</b> <i>Water Bodies</i> <i>No Data</i>	<p>Close to oil and gas leasing and geophysical exploration within 805 meters (2,640 feet) (0.50-mile) of lakes, ponds, naturally occurring wetlands, and impounding reservoirs (not including stock ponds for livestock).</p> <p><b>PURPOSE:</b> To protect ecological values, water quality, aquatic value, recreational attractions, water storage, and flood control.</p>		B.1		
	Special Status Terrestrial Wildlife				
<b>NL-10</b> <i>Gunnison Sage-grouse Critical Habitat and Breeding (Lek) Habitat</i> BLM Surface: 12,840 acres Split-estate: 26,700 acres	<p>Close to fluid mineral leasing and geophysical exploration in all Gunnison sage-grouse lek habitat (lek area plus a 0.6-mile radius). When existing leases expire, do not offer to lease Gunnison sage-grouse habitat, as defined by BLM, CPW, and USFWS.</p> <p><b>PURPOSE:</b> To protect Gunnison sage-grouse core areas and critical habitats.</p>		•		



**Table B-1**  
**Areas Closed to Fluid Mineral Leasing (NL)**

Allocation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Description	Alternative			
		A	B	C	D
<b>NL-2/NGD-3</b> <i>Hydrology River</i> BLM Surface: 26,990 acres Split-estate: 1,060 acres	Close to fluid mineral leasing and geophysical exploration and prohibit surface-disturbing activities within 402 meters (1,320 feet) the ordinary high-water mark (bank-full stage) or within 100 meters (328 feet) of the 100-year floodplain (whichever is greatest) on the following major rivers: Gunnison, North Fork Gunnison, San Miguel, Uncompahgre, and Dolores Rivers.  <b>PURPOSE:</b> To protect the river corridor that provide: a) water quality/filtering values; b) important riparian values; c) special status fish and wildlife species habitat; d) waterfowl and shorebird production values; e) valuable amphibian habitat; and f) high scenic and recreation values of these major rivers.		•		
	Visual Resource Management				
<b>NL-11</b> <i>Prominent Landmarks</i> <i>No Data</i>	Close to oil and gas leasing and geophysical exploration the following prominent landmarks: face of Jumbo Mountain, Youngs Peak, "H" Hill, near flanks of the West Elks, and Needle Rock ACEC.  <b>PURPOSE:</b> To protect the visual features of prominent landmarks.  <b>EXCEPTION, MODIFICATION, and WAIVER:</b> None; no exceptions, modifications, or waivers would be allowed.		B.1		
	Lands with Wilderness Characteristics				
<b>NL-12/NGD-24</b> <i>Lands with Wilderness Characteristics</i> BLM Surface: 42,150 acres	Close to fluid mineral leasing and geophysical exploration and prohibit surface-disturbing activities on identified lands being managed to protect inventoried wilderness characteristics: <ul style="list-style-type: none"><li>• Adobe Badlands WSA Adjacent (6,180 acres)</li><li>• Camel Back WSA Adjacent (6,950 acres)</li><li>• Dolores River Canyon WSA Adjacent (550 acres)</li><li>• Dry Creek Basin (7,030 acres)</li><li>• Lower Tabeguache/Campbell Creek (11,060 acres)</li><li>• Roc Creek (5,480 acres)</li><li>• Shavano Creek (4,900 acres)</li></ul> <b>PURPOSE:</b> To preserve inventoried wilderness characteristics and their locally, regionally, or nationally significant recreational, social, economic, and environmental values.		•		

**Table B-1**  
**Areas Closed to Fluid Mineral Leasing (NL)**

Allocation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Description	Alternative			
		A	B	C	D
	Coal				
<b>NL-13</b> <i>Active (and Future) and Existing (Inactive, Retired) Coal Leases</i> BLM Surface: 10,290 acres Split-estate: 11,030 acres	Close to oil and gas leasing areas within 402 meters (1,320 feet) (0.25-mile) of active (and future) and existing (inactive, retired) coal leases. This NL does not apply to operations that capture methane for commercial use.  <b>PURPOSE:</b> To protect the coal resource, the mine workings used to access and extract the coal resource, and miner safety.		B.1		
	Fluid Minerals				
<b>NL-14</b> <i>Recreation Park BLM</i> Surface: 9,220 acres Split-estate: 7,270 acres	Close to fluid mineral leasing and geophysical exploration the following areas where the BLM holds the fluid mineral rights: <ul style="list-style-type: none"> <li>• Curecanti National Recreation Area <ul style="list-style-type: none"> <li>○ BLM Surface: 7,120 acres</li> <li>○ Split-estate: 360 acres</li> </ul> </li> <li>• State Parks <ul style="list-style-type: none"> <li>○ BLM Surface: 2,080 acres</li> <li>○ Split-estate: 810 acres</li> </ul> </li> <li>• State Wildlife Areas <ul style="list-style-type: none"> <li>○ BLM Surface: 0 acres</li> <li>○ Split-estate: 5,900 acres</li> </ul> </li> </ul> <b>PURPOSE:</b> Protect high value wildlife habitat and recreation values associated with designated State Wildlife Areas, and state and municipal parks.		•		
	Recreation and Visitor Services				
<b>NL-15</b> <i>Recreation SRMAs</i> BLM Surface: 83,960 acres	Close the following SRMAs to fluid mineral leasing and geophysical exploration: <ul style="list-style-type: none"> <li>• Dolores River Canyon</li> <li>• Dry Creek RMZs 1, 2, and 4</li> <li>• Jumbo Mountain RMZ 1</li> <li>• Paradox Valley RMZ 4</li> <li>• Ridgway Trails RMZ 1</li> <li>• Roubideau</li> <li>• San Miguel River</li> <li>• Spring Creek</li> </ul> <b>PURPOSE:</b> To protect: (1) the prescribed physical, social, and operational natural resource recreational setting		•		



**Table B-1**  
**Areas Closed to Fluid Mineral Leasing (NL)**

Allocation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Description	Alternative			
		A	B	C	D
	character; (2) the targeted recreation activity, experience, and beneficial outcome opportunities; and (3) visitor health and safety in areas of high recreational value and/or significant recreational activity.				
	Areas of Critical Environmental Concern				
<b>NL-11</b> <i>Prominent Landmarks</i> <i>No Data</i>	Close to oil and gas leasing and geophysical exploration the following prominent landmarks: Needle Rock ACEC.  <b>PURPOSE:</b> To protect the visual features of prominent landmarks.  <b>EXCEPTION, MODIFICATION, and WAIVER:</b> None; no exceptions, modifications, or waivers would be allowed.		B.1		
<b>NL-16/NGD-26/SSR-57</b> <i>Special Designation ACEC</i> BLM Surface: 66,570 acres	Close the following ACECs to fluid mineral leasing and geophysical exploration: <ul style="list-style-type: none"><li>• Dolores Slickrock Canyon (10,660 acres) (NL/NGD)</li><li>• Roubideau-Potter-Monitor (20,430 acres) (NL/NGD)</li><li>• San Miguel River (35,480) (NL/SSR)</li></ul> <b>PURPOSE:</b> To protect the relevant and important values of each ACEC.		•		
	Wilderness and Wilderness Study Areas				
<b>NL-17</b> <i>Tabeguache Area</i> BLM Surface: 8,080 acres	Close the Tabeguache Area to fluid mineral leasing and geophysical exploration.  <b>PURPOSE:</b> To protect the wilderness character of the Tabeguache Area, in compliance with the Colorado Wilderness Act of 1993.	•	•	•	•
<b>NL-18/NGD-27</b> <i>WSAs</i> BLM Surface: 36,240 acres	Close WSAs to fluid mineral leasing and geophysical exploration and prohibit surface-disturbing activities.  <b>PURPOSE:</b> To preserve unimpaired the wilderness characteristics of wilderness study areas until such time as Congress acts to designate them as Wilderness Areas, or releases them for other uses, and to comply with BLM Manual 6330, Management of Wilderness Study Areas.	•	•	•	•

**Table B-1**  
**Areas Closed to Fluid Mineral Leasing (NL)**

Allocation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Description	Alternative			
		A	B	C	D
<b>NL-19/NGD-28</b> Sewemup Mesa WSA if Released from Wilderness Consideration BLM Surface: 1,780 acres	If released from wilderness consideration, close Sewemup Mesa to fluid mineral leasing and geophysical exploration and prohibit surface-disturbing activities.  <b>PURPOSE:</b> To preserve wilderness characteristics of lands within the former WSA in order to maintain management consistency of the area with the majority of Sewemup Mesa, which is in the Grand Junction Field Office.		•		
<b>NL-19/SSR-59</b> Sewemup Mesa WSA if Released from Wilderness Consideration BLM Surface: 1,780 acres	If released from wilderness consideration, close Sewemup Mesa to fluid mineral leasing and geophysical exploration and apply SSR restrictions.  <b>PURPOSE:</b> To preserve wilderness characteristics of lands within the former WSA in order to maintain management consistency of the area with the majority of Sewemup Mesa, which is in the Grand Junction Field Office.				•

<sup>1</sup>The sum of acres closed to leasing in this table may add up to more than the total acres closed to fluid mineral leasing presented in Chapter 2, as some areas may overlap.



**Table B-2**  
**No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
	Soils and Water				
<b>NSO-1/NGD-1</b> <i>Geology Soil:</i> <i>Saline/Selenium Soils</i> <b>BLM Surface:</b> 107,170 acres	<p><b>STIPULATION:</b> Prohibit surface occupancy and use and apply NGD restrictions on lands with soils, as mapped in the RMP, BLM's GIS database, or other maps provided by local, state, federal, or tribal agencies that are analyzed and accepted by the BLM, with the following special characteristics: saline/selenium soils.</p> <p><b>PURPOSE:</b> To improve reclamation potential, maintain soil stability and productivity of sensitive areas, and minimize contributions of soil constituents and sediments likely to affect downstream water quality, fisheries, and other downstream aquatic habitats.</p> <p><b>EXCEPTION, NSO-1:</b> Standard exception applies.</p> <p><b>EXCEPTION, NGD-1:</b> In addition to the standard exception, this stipulation may be excepted for soil research purposes.</p> <p><b>Standard MODIFICATION and WAIVER apply.</b></p>		•		
<b>NSO-2</b> <i>Selenium Soils</i> <b>BLM Surface:</b> 7,390 acres <b>Split-estate:</b> 2,470 acres	<p><b>STIPULATION:</b> Prohibit surface occupancy and use within 402 meters (0.25-mile) of soils with high and very high potential for selenium loading.</p> <p><b>PURPOSE:</b> To provide a buffer around soils that are sensitive to erosion and movement of selenium. To maintain soil productivity and ground cover and to minimize soil loss in order to protect downstream water sources from additional inputs of sediment and selenium.</p> <p><b>EXCEPTION, MODIFICATION, and WAIVER:</b> None; no exceptions, modifications, or waivers would be allowed.</p>		B.1		
<b>NSO-3</b> <i>Agricultural Operations</i> <i>No Data</i>	<p><b>STIPULATION:</b> Prohibit surface occupancy and use over or within 0.25-mile of any prime and unique farmlands, livestock operations, organic farm, conventional farm, ranch, orchard, and the West Elks American Viticultural area.</p> <p><b>PURPOSE:</b> To protect the agricultural economy. Prohibiting ground-disturbing activities near agricultural resources will protect these critical areas from spills, releases, and other impacts associated with oil and gas development (e.g., road building, well pad clearing, and pipeline installation).</p> <p><b>EXCEPTION, MODIFICATION, and WAIVER:</b> None; no exceptions, modifications, or waivers would be allowed.</p>		B.1		

**Table B-2**  
**No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
<b>NSO-4/NGD-2</b> <i>Geology: Slope Greater than 30 Percent</i> BLM Surface: 174,540 acres Split-estate: 46,590 acres	<b>STIPULATION:</b> Prohibit surface occupancy and use and apply NGD restrictions on lands with steep slopes greater than 30 percent.  <b>PURPOSE:</b> To minimize the risk of mass wasting, sedimentation and reduced reclamation costs, protecting soil productivity, rare or sensitive biota, minimizing risk to water bodies, fisheries and aquatic species habitats and protection of human health and safety (e.g., from landslides and mass wasting).  <b>EXCEPTION, NSO-4:</b> Standard exception applies.  <b>EXCEPTION, NGD-2:</b> In addition to the standard exception, this stipulation may be excepted for equestrian or pedestrian trails and fences built to BLM standards.  <b>Standard MODIFICATION and WAIVER apply.</b>		•		
<b>NSO-5</b> <i>High Geologic Hazard</i> <i>No Data</i>	<b>STIPULATION:</b> Prohibit surface occupancy and use on all areas with medium to high geologic hazard and on slopes greater than 30 percent.  <b>PURPOSE:</b> To keep oil and gas development off of steep slopes and from areas with geologic hazards to minimize accelerated erosion, which often has long-term, irreversible impacts.  <b>EXCEPTION, MODIFICATION, and WAIVER:</b> None; no exceptions, modifications, or waivers would be allowed.		B.1		
<b>NSO-6/SSR-8</b> <i>Geology: Slope Greater than 40 Percent</i> BLM Surface: 115,080 acres Split-estate: 23,990 acres	<b>STIPULATION:</b> Prohibit surface occupancy and use and apply SSR restrictions on lands with steep slopes greater than 40 percent.  <b>PURPOSE:</b> To minimize the risk of mass wasting, sedimentation and reduced reclamation costs, protecting soil productivity, rare or sensitive biota, minimizing risk to water bodies, fisheries and aquatic species habitats and protection of human health and safety (e.g., from landslides and mass wasting).  <b>EXCEPTION, NSO-6:</b> Standard exception applies.  <b>EXCEPTION, SSR-8:</b> In addition to the standard exception, this stipulation may be excepted for equestrian or pedestrian trails and fences built to BLM standards.  <b>Standard MODIFICATION and WAIVER apply.</b>				•



**Table B-2**  
**No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
NSO-CO-7 (BLM 1991a) Waterfowl and Shorebirds BLM Surface: 0 acres	<b>STIPULATION:</b> Prohibit surface occupancy and use on significant production areas; major areas are Waterfowl Habitat Management Areas and rookeries.  <b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b>	•			
<b>NSO-7</b> Major River Corridors BLM Surface: 5,540 acres Split-estate: 4,140 acres	<b>STIPULATION:</b> Prohibit surface occupancy and use within 0.50- to 1.0 mile of the North Fork of the Gunnison and Smith Fork of the Gunnison Rivers.  <b>PURPOSE:</b> To further protect (beyond 0.50-mile) the river corridor against water contamination and for high scenic and recreation values of these major rivers.  <b>EXCEPTION, MODIFICATION, and WAIVER:</b> None; no exceptions, modifications, or waivers would be allowed.		B.1		
<b>NSO-8</b> Floodplains No Data	<b>STIPULATION:</b> Prohibit surface occupancy and use within the 100-year floodplain of any stream or river system.  <b>PURPOSE:</b> To prevent flooding of oil and gas fields.  <b>EXCEPTION, MODIFICATION, and WAIVER:</b> None; no exceptions, modifications, or waivers would be allowed.		B.1		
<b>NSO-9/SSR-11</b> Hydrology River BLM Surface: 26,990 acres Split-estate: 1,060 acres	<b>STIPULATION:</b> Prohibit surface occupancy and use and apply SSR restrictions within 400 meters (1,312 feet) of the ordinary high-water mark (bank-full stage) or within 100 meters (328 feet) of the 100-year floodplain (whichever area is greatest) on the following major rivers: Gunnison, North Fork Gunnison, San Miguel, Uncompahgre, and Dolores Rivers.  <b>PURPOSE:</b> To protect rivers and adjacent aquatic habitat that provide: a) <i>special status</i> or <i>critical</i> fish and wildlife species habitat: b) important riparian values: c) water quality/filtering values: d) waterfowl and shorebird production values: e) valuable amphibian habitat: f) 100-year floodplain, and g) high scenic and recreation values of major rivers. Minimizing potential deterioration of water quality, high scenic and recreation values, maintain natural hydrologic function and condition of stream channels, banks, floodplains, and riparian communities, and preserve wildlife habitat including				•

**Table B-2**  
**No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
	designated critical habitat for federally listed fish species. The buffers are sized to accommodate the rivers' larger floodplains and wider riparian zones.  <b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b>				
<b>NSO-10/NGD-4</b> <i>Perennial Streams</i> BLM Surface: 39,640 acres Split-estate: 19,380 acres	<b>STIPULATION:</b> Prohibit surface occupancy and use and apply NGD restrictions within 152 meters (500 feet) of the edge of the ordinary high-water mark (bank-full stage) of perennial streams.  <b>PURPOSE:</b> Protect water quality, riparian zones, fens, fish habitat, aquatic habitat, and provide a clean, reliable source of water for downstream users. Buffers are expected to indirectly benefit migratory birds, wildlife habitat, amphibians, and other species.  <b>EXCEPTION, NSO-10:</b> Standard exception applies.  <b>EXCEPTION, NGD-4:</b> In addition to the standard exception, this stipulation may be excepted for essential soil-disturbing activities such as roads, trails, and spring development (subject to BMPs and COAs).  <b>Standard MODIFICATION and WAIVER apply.</b>		•		
<b>NSO-11/SSR-13</b> <i>Hydrology Features</i> BLM Surface: 26,050 acres Split-estate: 12,730 acres	<b>STIPULATION:</b> Prohibit surface occupancy and use and apply SSR restrictions within 100 meters (328 feet) from the mapped extent of perennial, intermittent, and ephemeral streams; riparian areas, fens, and/or wetlands; and water impoundments. For streams, measure the buffer from the ordinary high-water mark (bank-full stage); for wetland features, measure the buffer from the edge of the mapped extent.  <b>PURPOSE:</b> To maintain the proper functioning condition, including the vegetation, hydrologic and geomorphic functionality of wetland features. Protect water quality, riparian zones, fens, fish habitat, aquatic habitat, and provide a clean, reliable source of water for downstream users. Buffers are expected to indirectly benefit migratory birds, wildlife habitat, amphibians, and other species.  <b>Standard EXCEPTION, MODIFICATION, and WAIVER apply. .</b>				•



**Table B-2**  
**No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
<b>NSO-12</b> <i>Public Water Supplies</i> <i>No Data</i>	<p><b>STIPULATION:</b> Prohibit surface occupancy and use from 1,320 feet to 2,640 feet of a municipal water supply (classified surface water-supply stream segment), including intakes, and from 1,320 feet to 2,640 feet of all public water supplies that use a groundwater well or spring.</p> <p><b>PURPOSE:</b> To protect public water supplies, water quality, aquatic habitat, and human health.</p> <p><b>EXCEPTION, MODIFICATION, and WAIVER:</b> None; no exceptions, modifications, or waivers would be allowed.</p>		B.1		
<b>NSO-13</b> <i>Hydrology Source</i> <b>NSO-13 b</b> <i>Hydrology Public Well</i>  BLM Surface: 4,290 acres Split-estate: 1,530 acres	<p><b>STIPULATION:</b> Prohibit surface occupancy and use within 305 meters (1,000 feet) of a classified surface water supply stream segment (as measured from the average high-water mark) for a distance of 8 kilometers (5 miles) upstream of a public water supply intake with the classification “Water Supply” by the State of Colorado.</p> <p><b>STIPULATION:</b> No surface occupancy or use is allowed within 305 meters (1,000 feet) of groundwater public water supply wells.</p> <p>If public water providers develop source water protection plans, apply these stipulations to cover the appropriate designated area in the protection plan.</p> <p><b>PURPOSE:</b> To protect public water supplies, water quality, aquatic habitat and human health.</p> <p><b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b></p>			•	
<b>NSO-14</b> <i>Domestic Water Wells</i> BLM Surface: 11,100 acres Split-estate: 23,760 acres	<p><b>STIPULATION:</b> Prohibit surface occupancy and use within 305 meters (1,000 feet) of all domestic water wells.</p> <p><b>PURPOSE:</b> To protect public water supplies, water quality, and human health.</p> <p><b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b></p>		•		

**Table B-2**  
**No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
<b>NSO-15</b> <i>Domestic Water Wells and Private Water Systems</i> <i>No Data</i>	<b>STIPULATION:</b> Prohibit surface occupancy and use from 402 meters (1,320 feet) to 805 meters (2,640 feet) of all domestic water wells and private water systems, including ditches and domestic water decrees.  <b>PURPOSE:</b> To protect domestic water supplies, private water systems, and agriculture.  <b>EXCEPTION, MODIFICATION, and WAIVER:</b> None; no exceptions, modifications, or waivers would be allowed.		B.1		
<b>NSO-16</b> <i>Water Conveyance Systems</i> <i>No Data</i>	<b>STIPULATION:</b> Prohibit surface occupancy and use within 1,320 feet of any dam, ditch, irrigation intake, canal, or other water conveyance.  <b>PURPOSE:</b> To protect private water systems and agriculture.  <b>EXCEPTION, MODIFICATION, and WAIVER:</b> None; no exceptions, modifications, or waivers would be allowed.		B.1		
	Vegetation				
<b>NSO-17/NGD-6</b> <i>Plant Community</i> BLM Surface: 12,710 acres Split-estate: 870 acres	<b>STIPULATION:</b> Prohibit surface occupancy and use and apply NGD restrictions within occupied habitat for exemplary, ancient, rare, and relict vegetation communities.  <b>PURPOSE:</b> To protect exceptional vegetation values from direct removal, destruction or damage, and indirect threats associated with invasive weeds and sedimentation.  <b>EXCEPTION, NSO-17:</b> Standard exception applies.  <b>EXCEPTION, NGD-6:</b> In addition to the standard exception, this stipulation may be excepted for activities associated with restoring these areas or reducing threats to them.  <b>Standard MODIFICATION, and WAIVER apply.</b>		•		



**Table B-2**  
**No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
<b>NSO-18/NGD-7</b> Hydrology Features BLM Surface: 63,540 acres Split-estate: 2,530 acres	<p><b>STIPULATION:</b> Prohibit surface occupancy and use and apply NGD restrictions within 201 meters (660 feet) from the mapped extent of perennial, intermittent, and ephemeral streams; riparian areas, fens, and/or wetlands; springs and seeps; and water impoundments. For streams, measure the buffer from the ordinary high-water mark (bank-full stage); for wetland features, measure the buffer from the edge of the mapped extent.</p> <p><b>PURPOSE:</b> To maintain the proper functioning condition, including the vegetation, hydrologic and geomorphic functionality of wetland features. Protect water quality, riparian zones, fens, fish habitat, aquatic habitat, and provide a clean, reliable source of water for downstream users. Buffers are expected to indirectly benefit migratory birds, wildlife habitat, amphibians, and other species.</p> <p><b>EXCEPTION. NSO-18:</b> Standard exception applies.</p> <p><b>EXCEPTION, NGD-7:</b> This stipulation may be excepted subject to an on-site impact analysis with consideration given to level of damage to the riparian and wetland values, and likelihood of mitigation effectiveness.</p> <p><b>MODIFICATION:</b> Standard modification applies.</p> <p><b>WAIVER, NSO-18:</b> Standard waiver applies.</p> <p><b>WAIVER, NGD-7:</b> In addition to the standard waiver, the restriction on surface occupancy may be waived where it can be demonstrated that the project will disturb less than 0.5-acre and will take place in areas where cumulative impacts have not caused land health problems to Standards 2 (Riparian Systems) or 5 (Water Quality).</p>		•		
<b>NSO-19/SSR-16</b> Hydrology Features BLM Surface: 32,330 acres Split-estate: 660 acres	<p><b>STIPULATION:</b> Prohibit surface occupancy and use and apply SSR restrictions within 100 meters (325 feet) from the mapped extent of perennial, intermittent, and ephemeral streams; riparian areas, fens, and/or wetlands; and water impoundments. For streams, measure the buffer from the ordinary high-water mark (bank-full stage); for riparian and wetland features, measure the buffer from the edge of the mapped extent.</p>				•

**Table B-2**  
**No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
	<p><b>PURPOSE:</b> To maintain the proper functioning condition, including the vegetation, hydrologic and geomorphic functionality of wetland features. Protect water quality, riparian zones, fens, fish habitat, aquatic habitat, and provide a clean, reliable source of water for downstream users. Buffers are expected to indirectly benefit migratory birds, wildlife habitat, amphibians, and other species.</p> <p><b>EXCEPTION, NSO-19:</b> Standard exception applies.</p> <p><b>EXCEPTION, SSR-16:</b> In addition to the standard exception, an exception may be granted for stream crossings where no other alternative exists, such as another route, and must be approved by the BLM Authorized Officer.</p> <p><b>MODIFICATION, NSO-19:</b> Standard modification applies.</p> <p><b>MODIFICATION SSR-16:</b> In addition to the standard modification, wetland buffer dimensions may be averaged to accommodate variability in terrain or development plans. Up-gradient distances should be maintained (i.e., up-gradient buffer distances of 300 feet), while down-gradient buffers may be reduced to no less than 100 feet. The buffer averaging must, however, not adversely affect wetland functions and values, and a minimum buffer distance of 100 feet from the wetland edge is maintained. The buffer's intent is to protect the water source area of the wetland, which is more important than the down-gradient portion of the wetland.</p> <p><b>WAIVER:</b> Standard waiver applies.</p>				
	Terrestrial Wildlife				
<b>NSO-20/SSR-17</b> <i>Ecological Emphasis Areas</i> BLM Surface: 207,320 acres	<p><b>STIPULATION:</b> Prohibit surface occupancy and use and apply SSR restrictions within portions of the following ecological emphasis areas:</p> <ul style="list-style-type: none"> <li>• Adobe Zone I (11,480 acres)</li> <li>• Dry Creek Zones I-4 (14,310 acres)</li> <li>• Jumbo Mountain/McDonald Creek Zones I-5 (17,220 acres)</li> <li>• La Sal Zones I-3 (22,350 acres)</li> <li>• Monitor-Potter-Roubideau Zones I-II (27,320 acres)</li> <li>• Naturita Canyon Zones I-4 (15,620 acres)</li> <li>• Ridgway Zones I-4 (16,700 acres)</li> <li>• San Miguel Zones I-7 (25,520 acres)</li> </ul>		•		



**Table B-2**  
**No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
	<ul style="list-style-type: none"> <li>• Sims Mesa (19,650 acres)</li> <li>• Spring Canyon (3,380 acres)</li> <li>• Tabeguache Zones 1-10 ( 31,540 acres)</li> <li>• Terror Creek (2,230 acres)</li> </ul> <p><b>PURPOSE:</b> To provide protection for important ecological emphasis areas and migration corridors. Ecological emphasis areas are habitats determined by the BLM UFO to be crucial to plant and animal biodiversity and conservation at the landscape scale. Ecological emphasis areas encompass both cores and migration corridors.</p> <p><b>EXCEPTION, NSO-20:</b> Standard exception applies.</p> <p><b>EXCEPTION, SSR-17:</b> Standard exceptions apply. Plus, an exception would be provided for habitat improvement projects. Habitat improvements would be demonstrably positive for target species without being detrimental to native species populations.</p> <p><b>Standard MODIFICATION and WAIVER apply.</b></p>				
<b>NSO-21</b> <i>Mule Deer and Elk Habitat</i> BLM Surface: 35,770 acres Split-estate: 35,220 acres	<p><b>STIPULATION:</b> Prohibit surface occupancy and use in mule deer and elk crucial winter range, including severe winter range and winter concentration areas, and in elk reproduction areas. Prohibit surface occupancy and use in big game migration corridors.</p> <p><b>PURPOSE:</b> To protect the most important wildlife habitats in the North Fork area.</p> <p><b>EXCEPTION, MODIFICATION, and WAIVER:</b> None; no exceptions, modifications, or waivers would be allowed.</p>		B.1		
	Special Status Plants				
NSO-UB-2 (BLM 1989a) <i>Threatened, Endangered, Candidate, and Sensitive Plant Areas</i> BLM Surface: 210 acres	<p><b>STIPULATION:</b> Prohibit surface occupancy and use in the Fairview South ACEC/RNA to protect the threatened, endangered, candidate, and sensitive plants and their potential habitat.</p> <p><b>PURPOSE:</b> To protect the threatened, endangered, candidate, and sensitive plants and their potential habitat within the Fairview Research Natural Area, an area of critical environmental concern.</p>	•			

**Table B-2**  
**No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
	<p><b>EXCEPTION:</b> This stipulation may be waived, excepted, or modified by the BLM Authorized Officer if the lessee can demonstrate that operations can be conducted without causing unacceptable impacts on threatened, endangered, candidate, and sensitive plants and their potential habitats within these areas.</p> <p><b>Standard MODIFICATION and WAIVER apply.</b></p>				
<p>NSO-CO-8 (BLM 1991a) Special Status Plant Species BLM Surface: 2,130 acres</p>	<p><b>STIPULATION:</b> Prohibit surface occupancy and use on habitat areas with special status plant species (includes federally-listed and proposed species for listing and candidate species).</p> <p><b>EXCEPTION:</b> Exception for special status plant species habitat. The NSO may be altered after important factors are considered in a site-specific impact analysis such as the type and amount of surface disturbance, plant frequency and density, and the relocation of disturbances.</p> <p><b>Standard MODIFICATION and WAIVER apply.</b></p>	•			
<p><b>NSO-22/NGD-8</b> Plant Endangered Species Act (ESA)-Listed Species BLM Surface: 5,470 acres Split-estate: 390 acres</p>	<p><b>STIPULATION:</b> Prohibit surface occupancy and use and apply NGD restrictions within a 200-meter (656-foot) buffer from the edge of habitat of federally listed, proposed, or candidate threatened or endangered plant species, as mapped in the RMP, BLM's GIS database, or other maps provided by local, state, federal, or tribal agencies that are analyzed and accepted by the BLM.</p> <p><b>PURPOSE:</b> To protect federally listed, proposed, or candidate threatened or endangered plant species and habitat, and promote recovery of the species.</p> <p><b>EXCEPTION, NSO-22:</b> Standard exception applies.</p> <p><b>EXCEPTION, NGD-8:</b> This stipulation is excepted in the North Delta OHV area.</p> <p><b>MODIFICATION, NSO-22:</b> Standard modification applies.</p> <p><b>MODIFICATION, NGD-8:</b> In addition to the standard modification, small-scale disturbances (consider spatial and temporal variables) such as recreation trail construction, vegetation trimming, and hand tool work would be permitted outside of a 30-meter buffer from known federally protected plant populations.</p> <p><b>WAIVER:</b> Standard waivers apply.</p>		•		



**Table B-2**  
**No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
	Special Status Fish and Aquatic Wildlife				
<b>NSO-23/NGD-9</b> <i>Wildlife ESA-Listed Species (Occupied Federally Listed Fish Habitat)</i> BLM Surface: 51,460 acres Split-estate: 2,390 acres	<b>STIPULATION:</b> Prohibit surface occupancy and use and apply NGD restrictions within 1.0 mile of federally listed fish occupied habitat, as mapped in the RMP, BLM's GIS database, or other maps provided by local, state, federal, or tribal agencies that are analyzed and accepted by the BLM.  <b>PURPOSE:</b> To maintain the integrity of habitat for federally listed species and promote recovery of the species.  <b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b>		•		
<b>NSO-24/SSR-22</b> <i>Wildlife ESA-Listed Species (Occupied Federally Listed Fish Habitat)</i> BLM Surface: 270 acres Split-estate: 260 acres	<b>STIPULATION:</b> Prohibit surface occupancy and use and apply SSR restrictions within 2,500 feet of the ordinary high-water mark of the Lower Gunnison River, below the confluence with the Uncompahgre River, along occupied federally listed fish habitat.  <b>PURPOSE:</b> To maintain the integrity of habitat for federally listed species and promote recovery of the species.  <b>EXCEPTION, NSO-24:</b> Standard exception for NSO-15.  <b>EXCEPTION, SSR-22:</b> In addition to the standard exception, this stipulation may be excepted for essential future actions in which implementation of a professionally engineered design, construction, maintenance, and reclamation plan can mitigate to the fullest extent practicable all potential resource damage associated with the proposed action.  <b>Standard MODIFICATIONS and WAIVER apply.</b>				•
<b>NSO-25</b> <i>Occupied Native Cutthroat Trout Habitat</i> No Data	<b>STIPULATION:</b> Prohibit surface occupancy and use within 0.50-mile of stream segments that have existing and potential habitat for native cutthroat trout.  <b>PURPOSE:</b> To protect sensitive water bodies in the North Fork that provide habitat to native cutthroat trout.  <b>EXCEPTION, MODIFICATION, and WAIVER:</b> None; no exceptions, modifications, or waivers would be allowed.		B.1		

**Table B-2**  
**No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
<b>NSO-26/SSR-25</b> <i>Occupied Native Cutthroat Trout Habitat</i> BLM Surface: 13,260 acres Split-estate: 10,390 acres	<b>STIPULATION:</b> Prohibit surface occupancy and use and apply SSR restrictions within 325 feet of the edge of the ordinary high-water mark (bank-full stage) of occupied habitat for conservation populations (90 percent pure or greater) of native cutthroat trout.  <b>PURPOSE:</b> To protect occupied habitat for a federally threatened species.  <b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b>				•
<b>NSO-27</b> <i>Northern Leopard Frog Breeding Sites</i> <i>No Data</i>	<b>STIPULATION:</b> Prohibit surface occupancy and use within 0.25-mile of northern leopard frog breeding sites.  <b>PURPOSE:</b> To protect northern leopard frog breeding sites and surrounding habitat components.  <b>EXCEPTION, MODIFICATION, and WAIVER:</b> None; no exceptions, modifications, or waivers would be allowed.		B.1		
	Special Status Terrestrial Wildlife				
<b>NSO-28/NGD-10</b> <i>Wildlife ESA-Listed Species (Wildlife and Bird Species' Occupied Habitat)</i> <i>No Data</i>	<b>STIPULATION:</b> Prohibit surface occupancy and use and apply NGD restrictions within habitat for federally listed wildlife and bird species, except for Canada lynx and yellow-billed cuckoo, as mapped in the RMP, BLM's GIS database, or other maps provided by local, state, federal, or tribal agencies that are analyzed and accepted by the BLM.  <b>PURPOSE:</b> To protect all known and currently occupied core habitats for federally protected species, in accordance with the ESA.  <b>Standard EXCEPTION and WAIVER apply.</b>  <b>MODIFICATION, NSO-28:</b> Standard modification applies.  <b>MODIFICATION, NGD-10:</b> In addition to standard modifications, for unavoidable habitat losses, modification of the NGD area may be issued provided the following criteria are all satisfied:  1. Section 7 consultation is completed and USFWS recommended conservation measures are fully applied; 2. No direct "take" of protected species occurs as a result of the action; and		•		



**Table B-2**  
**No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
	3. Lost or degraded habitat is fully restored through on-site or off-site mitigation, as determined by the BLM.				
<b>NSO-29/SSR-28</b> <i>Wildlife ESA-Listed Species (Wildlife and Bird Species' Occupied Habitat)</i> <i>No Data</i>	<p><b>STIPULATION:</b> Prohibit surface occupancy and use and apply SSR restrictions within habitat for federally listed, proposed, or candidate threatened or endangered wildlife and bird species, except for Canada lynx, Mexican spotted owl, and yellow-billed cuckoo, as mapped in the RMP, BLM's GIS database, or other maps provided by local, state, federal, or tribal agencies that are analyzed and accepted by the BLM.</p> <p><b>PURPOSE:</b> To maintain the integrity of habitat for federally listed, proposed, or candidate, threatened or endangered wildlife species and promote recovery of the species.</p> <p><b>Standard EXCEPTION and WAIVER apply.</b></p> <p><b>MODIFICATION, NSO-29:</b> Standard modification applies.</p> <p><b>MODIFICATION, SSR-28:</b> In addition to standard modifications, for unavoidable habitat losses, modification of the NSO area may be issued provided the following criteria are all satisfied:</p> <ol style="list-style-type: none"> <li>1. Sec.7 consultation is completed and FWS recommended conservation measures are fully applied;</li> <li>2. No direct "take" of protected species occurs as a result of the action; and</li> <li>3. Lost or degraded habitat is fully restored through on-site or off-site mitigation, as determined by the BLM.</li> </ol>				•
<b>NSO-30/NGD-11</b> <i>Wildlife ESA-Listed Species (Yellow-billed Cuckoo Habitat)</i> BLM Surface: 6,080 acres Split-estate: 1,370 acres	<p><b>STIPULATION:</b> Prohibit surface occupancy and use and apply NGD restrictions in yellow-billed cuckoo habitat.</p> <p><b>PURPOSE:</b> To protect occupied habitat for a federal candidate species, in accordance with the ESA.</p> <p><b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b></p>		•		

**Table B-2**  
**No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
NSO-CO-2 (BLM 1991a) Grouse BLM Surface: 360 acres	<p><b>STIPULATION:</b> Prohibit surface occupancy and use within 0.25-mile radius of a lek site for grouse (sage-grouse and mountain sharp-tailed grouse, and lesser and greater prairie chickens).</p> <p><b>EXCEPTION:</b> For grouse leks the NSO area may be altered depending upon the active status of the lek or the geographical relationship of topographical barriers and vegetation screening to the lek site.</p> <p><b>Standard MODIFICATION and WAIVER apply.</b></p>	•			
NSO-31/SSR-32 Gunnison Sage-grouse Breeding (Lek) Habitat BLM Surface: 1,330 acres Split-estate: 5,370 acres	<p><b>STIPULATION:</b> Prohibit surface occupancy and use and apply SSR restrictions in Gunnison sage-grouse lek habitat (lek area plus a 0.6-mile radius).</p> <p><b>PURPOSE:</b> Maintain integrity of habitat surrounding leks that are used during the breeding period.</p> <p><b>EXCEPTION, NSO-31:</b> Standard exception applies.</p> <p><b>EXCEPTION, SSR-32:</b> An exception may be granted by the BLM UFO Field Manager, in cooperation with the CPW, if an environmental analysis determines that the action, as proposed or conditioned, would not impair the function or utility of the site for current or subsequent reproductive display, including daytime loafing/staging activities.</p> <p><b>Standard MODIFICATION and WAIVER apply.</b></p>			•	•
NSO-32/NGD-13 Gunnison Sage-grouse Breeding (Non-lek) Habitat BLM Surface: 42,850 acres Split-estate: 43,870 acres	<p><b>STIPULATION:</b> Prohibit surface occupancy and use and apply NGD restrictions within 4.0 miles of an active lek or within mapped Gunnison sage-grouse nesting and early brood-rearing habitat.</p> <p><b>PURPOSE:</b> Maintain integrity of habitat surrounding leks that are used during the breeding period</p> <p><b>EXCEPTION, MODIFICATION, and WAIVER, NSO-32:</b> Standard exception, modification, and waiver apply to NSO-32.</p> <p><b>EXCEPTION, NGD-13:</b> An exception may be granted by the BLM UFO Field Manager, in cooperation with the CPW, if an environmental analysis determines that the action, as proposed or conditioned, would not impair the function or utility of the site for current or subsequent reproductive</p>		•		



**Table B-2**  
**No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
	<p>display, including daytime loafing/staging activities.</p> <p><b>MODIFICATION, NGD-13:</b> The no surface occupancy or use area may be modified in extent, or substituted with a timing limitation, by the BLM UFO Field Manager if an environmental analysis finds 1) that a portion of the area is nonessential to site utility or function, 2) that the proposed action could be conditioned so as not to impair the function or utility of the site for current or subsequent reproductive display, including daytime loafing/staging activities, or 3) it is determined that the site has been unoccupied for a minimum of 10 years unless the area has been identified for habitat restoration and population recovery.</p> <p>The stipulation may also be modified if the proponent, BLM, CPW, and where necessary, other affected interest, negotiate compensation that satisfactorily offsets anticipated impacts on sage-grouse breeding activities and/or habitats.</p> <p><b>WAIVER, NGD-13:</b> The BLM UFO Field Manager may grant a waiver if, in cooperation with the CPW, it is determined that the lease area is no longer capable of supporting suitable lekking activity.</p>				
<p><b>NSO-33</b>  <i>Gunnison Sage-grouse Habitat</i>            BLM Surface:                1 acre            Split-estate:                0 acre</p>	<p><b>STIPULATION:</b> Prohibit surface occupancy and use within 4.0 miles of any known lek and within mapped Gunnison sage-grouse breeding, summer, and winter habitat outside of the 4.0-mile buffer.</p> <p><b>PURPOSE:</b> To maintain integrity of habitat surrounding leks that are used during the breeding period, as well as other Gunnison sage-grouse habitat.</p> <p><b>EXCEPTION, MODIFICATION, and WAIVER:</b> None; no exceptions, modifications, or waivers would be allowed.</p>		B.1		
<p><i>NSO-CO-3 (BLM 1991a)</i>  <i>Raptors (golden eagle, osprey, accipiters, falcons [except kestrel], buteos, and owls)</i></p>	<p><b>STIPULATION:</b> Prohibit surface occupancy and use within 0.125-mile of nest sites.</p> <p><b>MODIFICATION:</b> The NSO area may be altered depending on the active status of the nest site or the geographical relationship of topographic barriers and vegetation screening to the nest site.</p>	•			

**Table B-2**  
**No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
BLM Surface: 810 acres Split-estate: 390 acres	<b>Standard EXCEPTION and WAIVER apply.</b>				
NSO-CO-4 (BLM 1991a) Bald Eagle BLM Surface: 1,950 acres	<p><b>STIPULATION:</b> Prohibit surface occupancy and use within 0.25-mile of bald eagle roost or nest sites.</p> <p><b>MODIFICATION:</b> Exception for bald eagle roost site. The NSO applies to the essential features of the winter roost site complex. The NSO area may be altered depending on the active status of the roost or the geographical relationship of topographic barriers and vegetation screening.</p> <p><b>Standard EXCEPTION and WAIVER apply.</b></p>	•			
NSO-CO-5 (BLM 1991a) Peregrine Falcons BLM Surface: 1,710 acres Split-estate: 0 acres	<p><b>STIPULATION:</b> Prohibit surface occupancy and use within 0.25-mile of cliff nesting complex. (Note: Peregrine falcon was removed from the federal list of threatened and endangered species in 1999. It is currently managed as a BLM sensitive species.)</p> <p><b>PURPOSE:</b> To protect peregrine falcon nest sites.</p> <p><b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b></p>	•			
<b>NSO-34/NGD-14</b> Raptor Nest Sites BLM Surface: 4,270 acres Split-estate: 960 acres	<p><b>STIPULATION:</b></p> <p><u>Special Status Raptors:</u> Prohibit surface occupancy and use and surface-disturbing and disruptive activities within 0.25-mile of active/inactive special status raptor nest sites and associated alternate nests.</p> <p><u>Non-Special Status Raptors (except kestrel):</u> Prohibit surface occupancy and surface disturbing and disruptive activities within 0.125-mile of active nest sites and associated alternate nests.</p> <p><b>PURPOSE:</b> To protect special status raptor nests and surrounding habitat components and structure. To comply with the Migratory Bird Treaty Act.</p> <p><b>MODIFICATION, NSO-34:</b> Standard modification applies.</p> <p><b>MODIFICATION, NGD-14:</b> The NSO area may be modified in cases where topographic configuration ensures an effective visual/ noise barrier between disruptive activities and</p>		•		



**Table B-2**  
**No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
	the nest site or when activities will not result in adverse modification of vegetation and stand structure. <b>Standard EXCEPTION and WAIVER apply.</b>				
<b>NSO-35</b> <i>Bald Eagle, Golden Eagle, and Peregrine Falcon Nest Sites</i> BLM Surface: 2,770 acres Split-estate: 690 acres	<b>STIPULATION:</b> Prohibit surface occupancy and use within 0.25-mile of any active or historic bald eagle or golden eagle nest site and within 0.50-mile of any active or historic peregrine falcon nest site. <b>PURPOSE:</b> To protect bald and golden eagle and peregrine falcon nests and surrounding habitat components and structure. <b>EXCEPTION, MODIFICATION, and WAIVER:</b> None; no exceptions, modifications, or waivers would be allowed.		B. I		
<b>NSO-36/SSR-36</b> <i>Raptor Nest Sites (Except Mexican Spotted Owl)</i> BLM Surface: 8,440 acres Split-estate: 1,390 acres	<b>STIPULATION:</b> Prohibit surface occupancy and use and apply SSR restrictions in the following areas: <ul style="list-style-type: none"> <li>• Bald Eagle: within 0.25-mile of active and inactive nest sites or within 100 meters (328 feet) of abandoned nests (i.e., unoccupied for 5 consecutive years but with all or part of the nest remaining)</li> <li>• Golden Eagle: within 0.25-mile of active and inactive nest sites or within 100 meters (328 feet) of abandoned nests (i.e., unoccupied for 5 consecutive years but with all or part of the nest remaining)</li> <li>• Ferruginous Hawk, Peregrine Falcon, Prairie Falcon, and Northern Goshawk: within 0.50-mile of active and inactive nest sites</li> <li>• All other Special Status and Non-Special Status Raptors (except Mexican spotted owl): within 0.25-mile of active and inactive nest sites</li> </ul> <b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b>				•
<b>NSO-37/NGD-15</b> <i>Bald Eagle Winter Roost Sites</i> BLM Surface: 9,200 acres	<b>STIPULATION:</b> Prohibit surface occupancy and use and apply NGD restrictions within 0.5-mile of bald eagle winter roost sites. <b>PURPOSE:</b> To maintain the integrity of active winter roost sites and surrounding habitat.		•		

**Table B-2**  
**No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
Split-estate: 370 acres	<b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b>				
<b>NSO-38/SSR-38</b> <i>Bald Eagle Winter Roost Sites</i> BLM Surface: 4,570 acres Split-estate: 370 acres	<b>STIPULATION:</b> Prohibit surface occupancy and use and apply SSR restrictions within 0.25-mile of bald eagle winter roost sites.  <b>PURPOSE:</b> To maintain the integrity of active winter roost sites and surrounding habitat.  <b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b>				•
<i>NSO-CO-6 (BLM 1991a)</i> <i>Mexican Spotted Owl</i> <i>No Data</i>	<b>STIPULATION:</b> Prohibit surface occupancy and use within 0.25-mile of confirmed roost and nesting sites.  <b>PURPOSE:</b> To protect Mexican spotted owl roosts and nest sites.  <b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b>	•			
<b>NSO-39/NGD-16</b> <i>Mexican Spotted Owl</i> <i>No Data</i>	<b>STIPULATION</b> Prohibit surface occupancy and use and apply NGD restrictions within 1.0 mile of confirmed roost and nesting sites.  <b>PURPOSE:</b> To protect Mexican spotted owl roosts and nest sites.  <b>EXCEPTION, NSO-39:</b> Standard exception applies.  <b>EXCEPTION, NGD-16:</b> The BLM UFO Field Manager may grant an exception if an environmental analysis and Section 7 consultation with USFWS indicates that the nature or conduct of the action, as proposed or conditioned, would not impair the function or utility of the site for current or subsequent roosting activities or occupancy.  <b>Standard MODIFICATION and WAIVER apply.</b>		•		
<b>NSO-40/SSR-41</b> <i>Mexican Spotted Owl</i> <i>No Data</i>	<b>STIPULATION:</b> Prohibit surface occupancy and use and apply SSR restrictions on lands identified as Protected Activity Centers for Mexican spotted owl.  <b>PURPOSE:</b> To maintain the integrity of the breeding and brood rearing complex.  <b>EXCEPTION, NSO-40:</b> Standard exception applies.				•



**Table B-2**  
**No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
	<p><b>EXCEPTION, SSR-41:</b> An exception can be granted if an environmental analysis of the proposed action and subsequent consultation indicates that the nature or conduct of the activity could be conditioned so as not to impair the utility of Protected Activity Center for current or subsequent reproductive activity or occupancy.</p> <p><b>Standard MODIFICATION and WAIVER apply.</b></p>				
<p><b>NSO-41/NGD-17</b>  Wildlife BLM Sensitive Species (Gunnison and White-tailed Prairie Dogs)  BLM Surface:  6,480 acres  Split-estate:  710 acres</p>	<p><b>STIPULATION:</b> Prohibit surface occupancy and use and apply NGD restrictions within 150 feet of active prairie dog towns.</p> <p><b>PURPOSE:</b> To reduce or eliminate threats to BLM sensitive wildlife species to minimize the likelihood of and need for listing of these species under the ESA.</p> <p><b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b></p>		•		
<p><b>NSO-42/NGD-18</b>  Wildlife BLM Sensitive Species (Gunnison and White-tailed Prairie Dogs)  BLM Surface:  90 acres</p>	<p><b>STIPULATION:</b> Prohibit surface occupancy and use and surface-disturbing activities of more than 1.0 acre in active prairie dog towns that are <i>less than</i> 10 acres. Relocate these activities that require more than 1.0 acre so they are outside the active prairie dog town.</p> <p><b>PURPOSE:</b> To reduce threats to BLM sensitive wildlife species to minimize the likelihood of and need for listing of these species under the ESA.</p> <p><b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b></p>			•	
<p><b>NSO-43/NGD-19</b>  Wildlife Bat; Bat Roost Sites and Winter Hibernacula  BLM Surface:  2,900 acres</p>	<p><b>STIPULATION:</b> Prohibit surface occupancy and use and apply NGD restrictions within a 402-meter (0.25-mile) radius of the entrance of maternity roosts or hibernacula of federally listed, BLM sensitive, and Colorado State Species of Concern bat species, as mapped in the BLM's GIS database, or other maps provided by local, state, federal, or tribal agencies that are analyzed and accepted by the BLM.</p> <p><b>PURPOSE:</b> To protect listed and sensitive bat populations and crucial habitats.</p> <p><b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b></p>		•		

**Table B-2**  
**No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
<b>NSO-44/SSR-46</b> <i>Wildlife Bat; Bat Roost Sites and Winter Hibernacula (Federally Listed and BLM Sensitive Species)</i> BLM Surface: 2,900 acres	<b>STIPULATION:</b> Prohibit surface occupancy and use and apply SSR restrictions within a 402-meter (0.25-mile) radius of the entrance of maternity roosts or hibernacula of federally listed and BLM sensitive bat species, as mapped in the BLM's GIS database, or other maps provided by local, state, federal, or tribal agencies that are analyzed and accepted by the BLM.  <b>PURPOSE:</b> To protect sensitive bat species' maternity roosts and hibernacula  <b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b>				•
<b>NSO-CO-7</b> <i>(BLM 1991a)</i> <i>Waterfowl and Shorebird</i> No Data	<b>STIPULATION:</b> Prohibit surface occupancy and use on significant production areas (major areas are Waterfowl Habitat Management Areas and rookeries).  <b>PURPOSE:</b> To protect waterfowl and shorebird habitat and rookeries.  <b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b>	•			
<b>NSO-9/SSR-11</b> <i>Hydrology River</i> BLM Surface: 26,990 acres Split-estate: 1,060 acres	<b>STIPULATION:</b> Prohibit surface occupancy and use and apply SSR restrictions within 400 meters (1,312 feet) of the ordinary high-water mark (bank-full stage) or within 100 meters (328 feet) of the 100-year floodplain (whichever area is greatest) on the following major rivers: Gunnison, North Fork Gunnison, San Miguel, Uncompahgre, and Dolores Rivers.  <b>PURPOSE:</b> To protect rivers and adjacent aquatic habitat that provide: a) <i>special status</i> or <i>critical</i> fish and wildlife species habitat: b) important riparian values: c) water quality/filtering values: d) waterfowl and shorebird production values: e) valuable amphibian habitat: f) 100-year floodplain, and g) high scenic and recreation values of major rivers. Minimizing potential deterioration of water quality, high scenic and recreation values, maintain natural hydrologic function and condition of stream channels, banks, floodplains, and riparian communities, and preserve wildlife habitat including designated critical habitat for federally listed fish species. The buffers are sized to accommodate the rivers' larger floodplains and wider riparian zones.				•



**Table B-2**  
**No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
	<b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b>				
	Cultural Resources				
<b>NSO-45/NGD-20</b> <i>Allocation to Traditional Use</i> <i>No Data</i>	<p><b>STIPULATION:</b> Prohibit surface occupancy and use and apply NGD restrictions within 200 meters (656 feet) around eligible or potentially eligible sites allocated to Traditional Use.</p> <p><b>PURPOSE:</b> For the protection of traditional cultural uses, values and resources.</p> <p><b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b> Grants of exceptions, modifications and waivers may be subject to consultation with the appropriate Native American tribal entities.</p>		•		
<b>NSO-46/SSR-49</b> <i>Allocation to Traditional Use</i> <i>No Data</i>	<p><b>STIPULATION:</b> Prohibit surface occupancy and use and apply SSR restrictions within 200 meters (656 feet) around eligible or potentially eligible sites allocated to Traditional Use. In addition, consider visual impacts that projects may have on sites allocated to this use, and apply appropriate mitigation, which may include redesign.</p> <p><b>PURPOSE:</b> For the protection of traditional cultural uses, values and resources.</p> <p><b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b> Grants of exceptions, modifications and waivers may be subject to consultation with the appropriate Native American tribal entities.</p>				•
<b>NSO-SJ-1</b> (BLM 1991a) <i>Scenic, Natural, and Cultural Values and Resources</i> BLM Surface: 19,910 acres	<p><b>STIPULATION:</b> Prohibit surface occupancy and use within the following areas:</p> <ul style="list-style-type: none"> <li>• Tabeguache Cave II and Tabeguache Canyon (13,800 acres)</li> <li>• Dolores Cave (10 acres)</li> <li>• Tabeguache Pueblo (6,100 acres)</li> </ul> <p><b>PURPOSE:</b> For the protection of scenic, natural, and cultural values and resources.</p> <p><b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b></p>	•			

**Table B-2**  
**No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
<b>NSO-47/NGD-21</b> <i>Tabeguache Caves/Tabeguache Pueblos Area and Tabeguache Canyon</i> BLM Surface: 21,110 acres	<b>STIPULATION:</b> Prohibit surface occupancy and use and apply NGD restrictions in the Tabeguache Pueblos area and Tabeguache Canyon.  <b>PURPOSE:</b> For the protection of cultural values and resources.  <b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b>		•		
<b>NSO-48/NGD-22</b> <i>Cultural</i> BLM Surface: 980 acres Split-estate: 10 acres	<b>STIPULATION:</b> Prohibit surface occupancy and use and apply NGD restrictions within 200 meters (656 feet) of eligible cultural properties, traditional cultural properties listed National or State Registers of Historic Places (sites or districts), outstanding cultural resources to be nominated to the National or State Registers of Historic Places, interpreted and/or public use sites, and experimental-use sites.  <b>PURPOSE:</b> To protect cultural resource sites that may be damaged from inadvertent, unauthorized, or authorized uses. <b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b>		•		
<b>NSO-49/SSR-52</b> <i>Cultural</i> BLM Surface: 8,150 acres Split-estate: 1,290 acres	<b>STIPULATION:</b> Prohibit surface occupancy and use and apply SSR restrictions within 100 meters (328 feet) of known eligible cultural resources, traditional cultural properties, listed National Register sites/districts, outstanding cultural resources to be nominated to the National Register of Historic Places, interpreted and/or public use sites, and experimental-use sites (BLM Manual 8110.42[A-E]).  <b>PURPOSE:</b> To protect cultural resource sites that may be damaged from inadvertent, unauthorized, or authorized uses. <b>EXCEPTION, NSO-49:</b> Standard exception applies.  <b>EXCEPTION, SSR-52:</b> The BLM Authorized Officer may: (1) allow archaeological documentation, controlled surface collection, and/or excavation that, where not prohibited, may result in the sites physical alteration or destruction, and (2) change the site protection boundary on a case-by-case basis, taking into account topographical barriers, the nature of the proposed action, and the nature of the cultural resource site and/or area.  <b>Standard MODIFICATION and WAIVER apply.</b>				•



**Table B-2**  
**No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
<b>NSO-50</b> <i>National Register District</i> Alternative B: BLM Surface: 31,870 acres Alternatives C and D: BLM Surface: 1,080 acres	<b>STIPULATION:</b> Prohibit surface occupancy and use in the following areas nominated as National Register Districts:  <u>Alternative B:</u> <ul style="list-style-type: none"> <li>• Lower Uncompahgre Plateau between the Dry Creek Basin and Roubideau Creek</li> </ul> <u>Alternatives C and D:</u> <ul style="list-style-type: none"> <li>• Paradox Rock Art Complex</li> </ul> <b>PURPOSE:</b> For the protection of cultural values and resources.  <b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b>		•	•	•
	Visual Resources				
<b>NSO-51/NGD-23</b> <i>Visual Class I</i> BLM Surface: 53,870 acres Split-estate: 100 acres	<b>STIPULATION:</b> Prohibit surface occupancy and use and apply NGD restrictions in VRM Objective Class I areas.  <b>PURPOSE:</b> To protect the quality of the scenic (visual) values.  <b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b>		•		
<b>NSO-52</b> <i>Travel and Scenic Corridors</i> BLM Surface: 18,250 acres Split-estate: 20,940 acres	<b>STIPULATION:</b> Prohibit surface occupancy and use within 1.0 mile of: <ul style="list-style-type: none"> <li>• West Elk Scenic Byway (Colorado Highways 92 and 133 and Gunnison County Road 12)</li> <li>• 3100 Road</li> <li>• North Road</li> <li>• Crawford Road</li> <li>• Back River Road</li> </ul> <b>PURPOSE:</b> To protect the visual features visible from scenic corridors and scenic roads.  <b>EXCEPTION, MODIFICATION, and WAIVER:</b> None; no exceptions, modifications, or waivers would be allowed.		B.1		

**Table B-2**  
**No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
	Lands with Wilderness Characteristics				
<b>NSO-53/SSR-56</b> <i>Lands with Wilderness Characteristics</i>  BLM Surface: 18,320 acres	<b>STIPULATION:</b> Prohibit surface occupancy and use and apply SSR restrictions on identified lands being managed to protect inventoried wilderness characteristics: <ul style="list-style-type: none"> <li>• Camel Back WSA Adjacent (6,950 acres)</li> <li>• Dry Creek Basin (7,040 acres)</li> <li>• Roc Creek (4,340 acres)</li> </ul> <b>PURPOSE:</b> To preserve inventoried wilderness characteristics and their locally, regionally, or nationally significant recreational, social, economic, and environmental values.  <b>EXCEPTION, NSO-53:</b> Standard exception applies.  <b>EXCEPTION, SSR-56:</b> In addition to the standard exception, this stipulation may be excepted for projects that enhance wilderness characteristics over the long run, and that do not eliminate wilderness characteristics in the short term.  <b>Standard MODIFICATION and WAIVER apply.</b>				•
	Coal				
<b>NSO-CO-1</b> <i>(BLM 1991a)</i> <i>Coal Lands</i> BLM Surface: 0 acres Split-estate: 0 acres	<b>STIPULATION:</b> Prohibit surface occupancy and use on leases within the area of federally leased coal lands where oil and gas development would likely be incompatible with coal extraction.  <b>PURPOSE:</b> To protect (1) the coal resource; (2) the mine workings used to access and extract the coal resource; and (3) the safety of the miners.  <b>WAIVER:</b> This stipulation may be waived without a plan amendment if the lessee agrees that the drilling of a well will be subject to the following conditions: (1)(a) well must be plugged when the mine approaches within 500 feet of the well and re-entered or re-drilled upon completion of the mining operation; (b) well must be plugged in accordance with Mine Safety and Health Administration (formerly Mine Enforcement and Safety Administration) Informational Report 1052; (c) operator will provide accurate location of where the casing intercepts the coal by providing a directional and deviation survey of the well to the coal operator; or (2) relocate well into a permanent pillar or outside the area to be mined. A	•			



**Table B-2**  
**No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
	suspension of operations and production will be considered for the oil and gas lease only when a well is drilled and later plugged, a new well or re-entry is planned when the mine moves through the location.  <b>Standard EXCEPTION and MODIFICATION apply.</b>				
	Fluid Minerals				
<b>NSO-54</b> <i>Recreation Park</i> BLM Surface: 9,220 acres Split-estate: 7,270 acres	<b>STIPULATION:</b> Prohibit surface occupancy and use within the boundaries of: <ul style="list-style-type: none"> <li>• Curecanti National Recreation Area <ul style="list-style-type: none"> <li>○ BLM Surface: 7,120 acres</li> <li>○ Split-estate: 0 acres</li> </ul> </li> <li>• State Parks <ul style="list-style-type: none"> <li>○ BLM Surface (2,080 acres)</li> <li>○ Split-estate (810 acres)</li> </ul> </li> <li>• State wildlife areas <ul style="list-style-type: none"> <li>○ BLM Surface (0 acres)</li> <li>○ Split-estate (5,900 acres)</li> </ul> </li> <li>• Municipal Parks: <ul style="list-style-type: none"> <li>○ BLM Surface: 0 acres</li> <li>○ Split-estate: 560 acres</li> </ul> </li> </ul> <b>PURPOSE:</b> To protect the resources of wildlife areas and park units, such as county parks, state parks and wildlife areas, and federal parks.  <b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b>				•
<b>NSO-55</b> <i>Bureau of Reclamation Dams or Appurtenant Structures</i> BLM Surface: 300 acres Split-estate: 180 acres	<b>STIPULATION:</b> Prohibit surface occupancy and use within 1,500 feet of Ridgway, Crawford, and Paonia dams or their appurtenant structures. Also, prohibit directional drilling within 1,500 vertical feet below a Bureau of Reclamation dam or its appurtenant structures. (Directional and/or horizontal drilling could be conducted more than 1,500 feet below these dams and structures from outside the 1,500-foot radius of the structures.)  <b>PURPOSE:</b> To protect the integrity of US Bureau of Reclamation dams and associated structures.  <b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b>		•	•	•

**Table B-2**  
**No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
	Recreation and Visitor Services				
<b>NSO-SJ-3</b> <i>(BLM 1991a)</i> <b>NSO-56</b> <i>Recreation SRMAs</i> Alternative A: BLM Surface: 13,370 acres Alternative B: BLM Surface: 160,110 acres Alternative D: BLM Surface: 80,390 acres	<b>STIPULATION:</b> Prohibit surface occupancy and use within the following SRMAs: <u>Alternative A:</u> <ul style="list-style-type: none"> <li>• Dolores River Canyon</li> </ul> <u>Alternative B:</u> <ul style="list-style-type: none"> <li>• Burn Canyon</li> <li>• Dry Creek RMZ 3</li> <li>• Jumbo Mountain RMZ 2</li> <li>• Kinikin Hills</li> <li>• North Delta</li> <li>• Paradox Valley RMZs 1, 2, and 3</li> <li>• Ridgway Trails RMZ 2</li> <li>• Spring Creek RMZ 3</li> </ul> <u>Alternative D:</u> <ul style="list-style-type: none"> <li>• Dolores River Canyon</li> <li>• Dry Creek RMZs 2 and 4</li> <li>• Jumbo Mountain</li> <li>• Ridgway Trails</li> <li>• Roubideau</li> <li>• San Miguel River RMZs 1, 2, and 3</li> <li>• Spring Creek</li> </ul> <b>PURPOSE:</b> To protect specific recreation-tourism visitors and/or community customer markets to be served, and maintain the specific setting character and/or service delivery system conditions that are essential to achievement of the experiences and benefits identified in management objectives for the SRMA. <b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b>	•	•		•
<b>NSO-57</b> <i>Recreation Jumbo Mountain SRMA</i> BLM Surface: 5,020 acres	<b>STIPULATION:</b> Prohibit surface occupancy and use within the Jumbo Mountain SRMA. <b>PURPOSE:</b> To protect outstanding recreational opportunities in the area. <b>EXCEPTION, MODIFICATION, and WAIVER:</b> None; no exceptions, modifications, or waivers would be allowed.		B.1		



**Table B-2**  
**No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
	Areas of Critical Environmental Concern				
<b>NSO-UB-7</b> <i>(BLM 1989a)</i> <b>NSO-58/NGD-26/SSR-57</b> <i>Special Designation ACEC</i> Alternative A: BLM Surface: 7,220 acres Alternative B: BLM Surface: 149,260 acres Alternative C: BLM Surface: 80 acres Alternative D: BLM Surface: 51,310 acres	<b>STIPULATION:</b> Prohibit surface occupancy and use and apply SSR/NGD restrictions in the following ACECs:  <u>Alternative A (NSO only)</u> <ul style="list-style-type: none"> <li>• Adobe Badlands (6,370 acres)</li> <li>• Fairview South (210 acres)</li> <li>• Needle Rock (80 acres)</li> <li>• Tabeguache Creek (560 acres)</li> </ul> <u>Alternative B (NSO/NGD, except where noted)</u> <ul style="list-style-type: none"> <li>• Coyote Wash (2,100 acres)</li> <li>• East Paradox (7,360 acres)</li> <li>• Fairview South (CNHP Expansion) (4,250 acres)</li> <li>• La Sal Creek (10,490 acres)</li> <li>• Lower Uncompahgre Plateau (31,810 acres)</li> <li>• Needle Rock (80 acres) (NSO/SSR)</li> <li>• Paradox Rock Art (1,080 acres)</li> <li>• Salt Desert Shrub Ecosystem (34,510 acres) (includes the existing Adobe Badlands ACEC/ONA)</li> <li>• San Miguel Gunnison Sage-grouse (470 acres)</li> <li>• Sims-Cerro Gunnison Sage-grouse (25,620 acres)</li> <li>• Tabeguache Pueblo and Tabeguache Caves (26,400 acres)</li> <li>• West Paradox (5,190 acres)</li> </ul> <u>Alternative C (NSO only)</u> <ul style="list-style-type: none"> <li>• Needle Rock (80 acres)</li> </ul> <u>Alternative D (NSO only, except where noted)</u> <ul style="list-style-type: none"> <li>• Adobe Badlands (6,370 acres)</li> <li>• Biological Soil Crust (1,900 acres) (NSO/SSR)</li> <li>• Dolores River Slickrock Canyon (9,770 acres) (NSO/SSR)</li> <li>• East Paradox (7,360 acres)</li> <li>• Fairview South (BLM Expansion) (610 acres) (NSO/SSR)</li> <li>• Needle Rock (80 acres)</li> <li>• Paradox Rock Art (1,080 acres)</li> <li>• Roubideau Corridors (8,720 acres) (NSO/SSR)</li> <li>• San Miguel River (22,780 acres)</li> </ul> <b>PURPOSE:</b> To protect and prevent irreparable damage to resources described in the relevance and importance criteria for the designated ACEC.	•	•	•	•

**Table B-2**  
**No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
	<b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b>				
	Wild and Scenic Rivers				
<b>NSO-59/NGD-29</b> <i>Special Designation WSR ("Wild") BLM Surface:</i> 17,210 acres <i>Split-estate:</i> 90 acres	<b>STIPULATION:</b> Prohibit surface occupancy and use and apply NGD restrictions within the WSR study corridor, as defined in the Uncompahgre Wild and Scenic River Suitability Report ( <b>Appendix P</b> ), of the following segments identified as suitable for inclusion in the National Wild and Scenic Rivers System with the classification of "wild:" <ul style="list-style-type: none"> <li>• Monitor Creek</li> <li>• Potter Creek</li> <li>• Roubideau Creek Segment I</li> <li>• Dry Creek</li> <li>• Saltado Creek</li> <li>• San Miguel River Segment 2</li> <li>• Tabeguache Creek Segment I</li> <li>• Dolores River Segment Ia</li> <li>• La Sal Creek Segment 3</li> </ul> <b>PURPOSE:</b> To protect WSR outstandingly remarkable values, free-flowing nature, and water quality of eligible or suitable river segments and their consequent recreational, social, economic, and environmental significance.  <b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b>		•		
<b>NSO-60</b> <i>Special Designation WSR ("Wild" or "Scenic")</i> BLM Surface: 14,850 acres <i>Split-estate:</i> 70 acres	<b>STIPULATION:</b> Prohibit surface occupancy and use within the WSR study corridor, as defined in the Uncompahgre Wild and Scenic River Suitability Report ( <b>Appendix P</b> ), of the following segments identified as suitable for inclusion in the National Wild and Scenic Rivers System with the classification of "wild" or "scenic:" <ul style="list-style-type: none"> <li>• Monitor Creek</li> <li>• Potter Creek</li> <li>• Roubideau Creek Segment I</li> <li>• Beaver Creek</li> <li>• Saltado Creek</li> <li>• San Miguel River Segment 2</li> <li>• Tabeguache Creek Segment I</li> </ul>				•

**Table B-2**  
**No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
	<ul style="list-style-type: none"> <li>• Lower Dolores River</li> <li>• Dolores River Segment 1a</li> <li>• La Sal Creek Segment 2</li> <li>• La Sal Creek Segment 3</li> </ul> <p><b>PURPOSE:</b> To protect VWSR outstandingly remarkable values, free-flowing nature, and water quality of eligible or suitable river segments and their consequent recreational, social, economic, and environmental significance.</p> <p><b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b></p>				
	National Trails and Byways				
<b>NSO-61</b> <i>Special Designation Trail (Old Spanish National Historic Trail)</i> BLM Surface: 5,610 acres	<p><b>STIPULATION:</b> Prohibit surface occupancy and use within an 805-meter (0.50-mile) of the centerline of the following: Old Spanish National Historic Trail.</p> <p><b>PURPOSE:</b> To protect the physical evidence of the trail, associated cultural and historic resources, and integrity of the viewshed associated with the Old Spanish National Historic Trail.</p> <p><b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b></p>		•		•
<b>NSO-62</b> <i>Special Designation Trail (Old Spanish National Historic Trail)</i> BLM Surface: 5,610 acres	<p><b>STIPULATION:</b> Prohibit surface occupancy and use within 50-meters (164 feet) of the centerline of the following: Old Spanish National Historic Trail.</p> <p><b>PURPOSE:</b> To protect the Old Spanish National Historic Trail.</p> <p><b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b></p>			•	
<b>NSO-63</b> <i>Special Designation Trail (National Recreation Trails)</i> BLM Surface: 25,740 acres	<p><b>STIPULATION:</b> Prohibit surface occupancy and use within 805 meters (0.50-mile) of the center line of National Recreation Trails.</p> <p><b>PURPOSE:</b> To protect the physical evidence of the trail, associated cultural and historic resources, and integrity of the viewshed associated with the trail.</p> <p><b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b></p>		•		



**Table B-2**  
**No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
<b>NSO-64</b> <i>Special Designation Trail (National Recreation Trails)</i> BLM Surface: 7,180 acres	<b>STIPULATION:</b> Prohibit surface occupancy and use within 200 meters (656 feet) of the center line of designated National Recreation trails.  <b>PURPOSE:</b> To protect the physical evidence of the trail, associated cultural and historic resources, and integrity of the viewshed associated with the trail.  <b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b>			•	•
<b>NSO-65</b> <i>Special Designation Byway (Scenic Byways)</i> BLM Surface: 34,680 acres Split-estate: 12,440 acres	<b>STIPULATION:</b> Prohibit surface occupancy and use within the viewshed of designated scenic byways, up to a distance of 805 meters (0.50-mile).  <b>PURPOSE:</b> To protect the quality of the scenic (visual) values of scenic, historic, or backcountry byways.  <b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b>		•		
	Public Health and Safety				
<b>NSO-66/NGD-30</b> <i>DOE Uranium Mill Tailings Remedial Action Area</i> BLM Surface: 20 acres Split-estate: 5 acres	<b>STIPULATION:</b> Prohibit surface occupancy and use and surface-disturbing activities in the supplemental standard area around Uravan associated with the US DOE Uranium Mill Tailings Remedial Action Area.  <b>PURPOSE:</b> To protect humans from potentially contaminated soils.  <b>EXCEPTION:</b> In addition to the standard exception, concurrence must be obtained from the applicable regulatory agency for these areas (e.g., US DOE, Nuclear Regulatory Commission, Colorado Department of Public Health and Environment, and/or EPA).  <b>Standard MODIFICATION and WAIVER apply.</b>		•	•	•

**Table B-2**  
**No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
<b>NSO-67</b> <i>Dwellings and High-Occupancy Buildings</i> <i>No Data</i>	<p><b>STIPULATION:</b> Prohibit surface occupancy and use within 152 meters (500 feet) of occupied dwellings and building units (as defined by the State of Colorado), or within 305 meters (1,000 feet) from high-occupancy buildings (as defined by the State of Colorado).</p> <p><b>PURPOSE:</b> To protect residential developments within unincorporated communities (towns and subdivisions).</p> <p><b>Standard EXCEPTION, MODIFICATION, and WAIVER.</b></p>		•		•
<b>NSO-68</b> <i>Community Facilities</i> BLM Surface: 2,730 acres Split-estate: 3,780 acres	<p><b>STIPULATION:</b> Prohibit surface occupancy and use within 402 meters (0.25-mile) of schools and community facilities:</p> <ul style="list-style-type: none"> <li>• North Fork Swimming Pool</li> <li>• Crawford School</li> <li>• Hotchkiss High School</li> <li>• North Fork Community Montessori School</li> <li>• North Fork Recycling Center</li> </ul> <p><b>PURPOSE:</b> Providing better protections for public health and safety, this designation will also protect the North Fork's unique small town, rural setting.</p> <p><b>EXCEPTION, MODIFICATION, and WAIVER:</b> None; no exceptions, modifications, or waivers would be allowed.</p>		B.1		

<sup>1</sup>The sum of acres with NSO stipulations in this table may add up to more than the total acres with NSO stipulations presented in Chapter 2, as some areas may overlap.

**Table B-3**  
**Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
	Land Health				
<b>CSU-1/SSR-1</b> <i>Lands, Streams, and Wetlands “Not Meeting” or “Meeting with Problems” BLM Colorado Public Land Health Standards</i> BLM Surface: 393,000 acres Split-estate: 810 acres	<b>STIPULATION:</b> Apply CSU/SSR restrictions on lands, streams, and wetlands “not meeting” or “meeting with problems” BLM Colorado Public Land Health Standards (BLM 1997).  <b>PURPOSE:</b> To reduce conflicts between authorized uses and projects or natural processes that improve land health.  <b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b>		•		
	Soils and Water				
<b>CSU-2/SSR-2</b> <i>Geology Soil: Saline/Selenium Soils</i> BLM Surface: 107,170 acres	<b>STIPULATION:</b> Surface occupancy or use may be restricted and SSR restrictions applied on lands within mapped soils with the following special characteristics: saline/selenium soils. Special design, construction, and implementation measures, including relocation of operation by more than 200 meters (656 feet), may be required. Prior to authorizing activities in this area, the operator may be required to submit an engineering/reclamation plan to avoid, minimize, and mitigate potential effects to soil productivity.  <b>PURPOSE:</b> To improve reclamation potential, maintain soil stability and productivity of sensitive areas, and minimize contributions of salinity, selenium, and sediments likely to affect downstream water quality, fisheries, and other downstream aquatic habitats.  <b>EXCEPTION, CSU-2:</b> Standard exception applies.  <b>EXCEPTION, SSR-2:</b> This stipulation may be excepted for soil research purposes.  <b>Standard MODIFICATION and WAIVER apply.</b>			•	
<b>CSU-3/SSR-3</b> <i>Geology Soil: Saline/Selenium Soils</i> BLM Surface: 107,170 acres	<b>STIPULATION:</b> Surface occupancy or use may be restricted and SSR restrictions applied on lands within mapped soils with the following special characteristics: saline/selenium soils. Special design, construction, and implementation measures, including relocation of operation by more than 200 meters (656 feet), may be required. Prior				•



**Table B-3**  
**Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
	<p>to authorizing activities in this area, the operator may be required to submit an engineering/reclamation plan to avoid, minimize, and mitigate potential effects to soil productivity.</p> <p><b>PURPOSE:</b> To improve reclamation potential, maintain soil stability and productivity of sensitive areas, and minimize contributions of salinity, selenium, and sediments likely to affect downstream water quality, fisheries, and other downstream aquatic habitats.</p> <p><b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b></p>				
<p><b>CSU-4/SSR-4</b>  <i>Geology Soil: Potential Biological Soil Crust</i>            BLM Surface:            254,840 acres</p>	<p><b>STIPULATION:</b> Surface occupancy or use may be restricted and SSR restrictions applied on lands within mapped soils with the following special characteristics: in areas mapped as having potential biological soil crust. Special design, construction, and implementation measures, including relocation of operations by more than 200 meters (656 feet), may be required. Prior to authorizing activities in this area, the operator may be required to submit an engineering/reclamation plan to mitigate potential effects to soil productivity.</p> <p><b>PURPOSE:</b> To proactively protect potential biological soil crust. Additionally, biological soil crust provides important soil cover component, serves to protect and enhance soil productivity, and acts as a stabilizer to inhibit erosion.</p> <p><b>EXCEPTION, CSU-4:</b> Standard exception applies.</p> <p><b>EXCEPTION, SSR-4:</b> This stipulation may be excepted for soil research purposes.</p> <p><b>Standard MODIFICATION and WAIVER apply.</b></p>		•		
<p><b>CSU-5/SSR-5</b>  <i>Geology Soil: East Paradox Biological Soil Crust</i>            BLM Surface:            1,650 acres</p>	<p><b>STIPULATION:</b> Surface occupancy or use may be restricted and SSR restrictions applied on lands within mapped soils with the following special characteristics: in areas mapped as East Paradox biological soil crust. Special design, construction, and implementation measures, including relocation of operations by more than 200 meters (656 feet), may be required. Prior to authorizing activities in this area, the operator may be required to submit an engineering/reclamation plan to mitigate potential effects to soil productivity.</p>			•	

**Table B-3**  
**Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
	<p><b>PURPOSE:</b> To proactively protect biological soil crust. Additionally, biological soil crust provides important soil cover component, serves to protect and enhance soil productivity, and acts as a stabilizer to inhibit erosion.</p> <p><b>EXCEPTION, CSU-5:</b> Standard exception applies.</p> <p><b>EXCEPTION, SSR-5:</b> This stipulation may be excepted for soil research purposes.</p> <p><b>Standard MODIFICATION and WAIVER apply.</b></p>				
<p><b>CSU-6/SSR-6</b>  <i>Geology Soil: Potential Biological Soil Crust</i></p> <p><i>No Data</i></p>	<p><b>STIPULATION:</b> Surface occupancy or use may be restricted and SSR restrictions applied on lands within mapped soils with the following special characteristics: in areas mapped as having potential biological soil crust only when high levels of crust development are found. Determine the level of crust development using best available techniques. Special design, construction, and implementation measures, including relocation of operations by more than 200 meters (656 feet), may be required. Prior to authorizing activities in this area, the operator may be required to submit an engineering/reclamation plan to mitigate potential effects to soil productivity.</p> <p><b>PURPOSE:</b> To proactively protect potential biological soil crust. To improve reclamation potential, maintain soil stability and productivity of sensitive areas, and minimize contributions of salinity, selenium, and sediments likely to affect downstream water quality, fisheries, and other downstream aquatic habitats.</p> <p><b>EXCEPTION, CSU-6:</b> Standard exception applies.</p> <p><b>EXCEPTION, SSR-6:</b> This stipulation may be excepted for soil research purposes.</p> <p><b>Standard MODIFICATION and WAIVER apply.</b></p>				•

**Table B-3**  
**Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
<b>CSU-CO-27</b> <i>(BLM 1991a)</i> <i>Slopes of or Greater than 40 Percent</i> BLM Surface: 59,480 acres Split-estate: 1,960 acres	<p><b>STIPULATION:</b> Before disturbing the surface on slopes of 40 percent or greater, require a BLM Authorized Officer's approval of a professional engineering/reclamation plan. Require that such a plan demonstrate how the following will be accomplished:</p> <ul style="list-style-type: none"> <li>• Site productivity will be restored.</li> <li>• Surface runoff will be adequately controlled.</li> <li>• Off-site areas will be protected from accelerated erosion such as rilling, gullyng, piping, and mass wasting.</li> <li>• Surface-disturbing activities would not be conducted during extended wet periods.</li> </ul> <p><b>PURPOSE:</b> Slopes greater than 40 percent are typically considered steep slopes. Surface-disturbing activities on steep slopes should be avoided to minimize accelerated erosion and loss of soil productivity, which often has long-term, irreversible impacts.</p> <p><b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b></p>	•			
<b>CSU-7</b> <i>Moderate Geologic Hazard</i> <i>No Data</i>	<p><b>STIPULATION:</b> Surface occupancy or use may be restricted on all areas with moderate geologic hazards. Special design, construction, and implementation measures, including relocation of operations by more than 200 meters (656 feet), may be required.</p> <p><b>PURPOSE:</b> To keep oil and gas development off slopes with potential mining-related problems.</p> <p><b>EXCEPTION, MODIFICATION, and WAIVER:</b> None; no exceptions, modifications, or waivers would be allowed.</p>		B.1		
<b>CSU-8/SSR-7</b> <i>Geology: Slope Greater than 40 Percent</i> BLM Surface: 115,080 acres Split-estate: 23,990 acres	<p><b>STIPULATION:</b> Surface occupancy or use may be restricted and SSR restrictions applied on steep slopes over 40 percent. Special design, construction, and implementation measures, including relocation of operations by more than 200 meters (656 feet), may be required. Prior to authorizing activities in this area, the operator may be required to submit an engineering/reclamation plan to mitigate potential effects to slope stability.</p>			•	



**Table B-3**  
**Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
	<p><b>PURPOSE:</b> Slopes greater than 40 percent are typically considered steep slopes. To minimize the risk of mass wasting and sedimentation, reduce reclamation costs, protect soil productivity, rare, or sensitive biota, minimize risk to water bodies, fisheries, and aquatic species habitats, and protect human health and safety (e.g., from landslides and mass wasting).</p> <p><b>EXCEPTION, CSU-8:</b> Standard exception applies.</p> <p><b>EXCEPTION, SSR-7:</b> This stipulation may be excepted for equestrian or pedestrian trails and fences built to BLM standards.</p> <p><b>Standard MODIFICATION and WAIVER apply.</b></p>				
<p><b>CSU-9/SSR-9</b>  <i>Geology: Slopes of 30 to 39 Percent</i>            BLM Surface:                60,200 acres            Split-estate:                22,760 acres</p>	<p><b>STIPULATION:</b> Surface occupancy or use may be restricted and SSR restrictions applied on steep slopes of 30 to 39 percent. Special design, construction, and implementation measures, including relocation of operations by more than 200 meters (656 feet), may be required. Prior to authorizing activities in this area, the operator may be required to submit an engineering/reclamation plan to mitigate potential effects to slope stability.</p> <p><b>PURPOSE:</b> Slopes greater than 30 percent are typically considered steep slopes. To minimize the risk of mass wasting and sedimentation, reduce reclamation costs, protect soil productivity, rare, or sensitive biota, minimize risk to water bodies, fisheries, and aquatic species habitats, and protect human health and safety (e.g., from landslides and mass wasting).</p> <p><b>EXCEPTION, CSU-9:</b> Standard exception applies.</p> <p><b>EXCEPTION, SSR-9:</b> This stipulation may be excepted for equestrian or pedestrian trails and fences built to BLM standards.</p> <p><b>Standard MODIFICATION and WAIVER apply.</b></p>				•

**Table B-3**  
**Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
<b>CSU-10/SSR-10</b> <i>Hydrology River</i> BLM Surface: 26,990 acres Split-estate: 1,060 acres	<p><b>STIPULATION:</b> Surface occupancy or use may be restricted and SSR restrictions may be applied within 402 meters (1,320 feet) of the ordinary high-water mark (bank-full stage) or within 100 meters (328 feet) of the 100-year floodplain (whichever area is greatest) on the following major rivers: Gunnison, North Fork Gunnison, San Miguel, Uncompahgre, and Dolores Rivers.</p> <p><b>PURPOSE:</b> To protect river corridors that provide: a) water quality/filtering values; b) important riparian values; c) special status fish and wildlife species habitat; d) waterfowl and shorebird production values; e) valuable amphibian habitat; and f) high scenic and recreation values of these major rivers.</p> <p><b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b></p>			•	
<b>CSU-11/SSR-12</b> <i>Perennial Streams</i> BLM Surface: 26,050 acres Split-estate: 12,730 acres	<p><b>STIPULATION:</b> Surface occupancy or use may be restricted and SSR restrictions may be applied on lands within 325 feet of the edge of the ordinary high-water mark (bank-full stage) of perennial streams.</p> <p><b>PURPOSE:</b> To protect water quality, aquatic value, and prevent channel degradation.</p> <p><b>EXCEPTION:</b> Essential soil disturbing activities such as roads, trails, and spring development (subject to BMPs and COAs).</p> <p><b>Standard MODIFICATION and WAIVER apply.</b></p>			•	
<b>CSU-12</b> <i>Hydrology Features</i> BLM Surface: 13,590 acres Split-estate: 6650 acres	<p><b>STIPULATION:</b> Surface occupancy or use may be restricted on lands adjacent to perennial, intermittent, and ephemeral streams; riparian areas, fens, and/or wetlands; and water impoundments. For perennial, intermittent, and ephemeral streams, measure the extent from the ordinary high-water mark (bank-full stage); for wetland features, measure the buffer from the edge of the mapped extent. For unmapped wetlands, determine the vegetation boundary (from which the buffer originates) in the field. Surface-disturbing activities may require special engineering design, construction, and implementation measures, including relocation of operations beyond 200 meters (656 feet) from</p>			•	

**Table B-3**  
**Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
	<p>the extent of water impoundments, streams, riparian areas, and/or wetlands to protect water resources. Apply the CSU restrictions from 325 to 500 feet of the edge of the ordinary high-water mark (bank-full stage) of perennial streams.</p> <p><b>PURPOSE:</b> To maintain the proper functioning condition, including the vegetation, hydrologic, and geomorphic functionality of wetland features. Protect water quality, riparian zones, fens, fish habitat, and aquatic habitat, and provide a clean, reliable source of water for downstream users. Buffers are expected to indirectly benefit migratory birds, wildlife habitat, amphibians, and other species.</p> <p><b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b></p>				
<p><b>CSU-13</b></p> <p><i>Hydrology Source</i></p> <p>BLM Surface: 9,470 acres</p> <p>Split-estate: 3,060 acres</p>	<p><b>STIPULATION:</b> Surface occupancy or use may be restricted on lands located greater than 305 meters (1,000 feet) but less than 805 meters (2,640 feet) (0.50-mile) of a classified surface water supply stream segment (as measured from the average high-water mark) for a distance of 8.05 kilometers (5 miles) miles upstream of a public water supply intake classified by the State as a “water supply,” and all public water supplies that use a groundwater well or spring. Special design, construction, and implementation measures, including relocation of operations by more than 200 meters (656 feet), may be required. Prior to authorizing activities in this area, the operator may be required to submit a coordinated water resources monitoring plan to mitigate potential effects to the source water protection areas of public water supply.</p> <p>If public water providers develop source water protection plans, apply this stipulation to cover the appropriate designated area in the protection plan and apply these protection measures.</p> <p><b>PURPOSE:</b> To protect public water supplies, water quality, aquatic habitat, and human health.</p> <p><b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b></p>			•	•



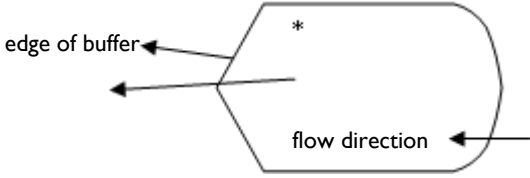
**Table B-3**  
**Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
	Vegetation				
<b>CSU-14/SSR-14</b> <i>Plant Community</i> BLM Surface: 12,710 acres Split-estate: 870 acres	<p><b>STIPULATION:</b> Surface occupancy or use may be restricted and SSR restrictions applied within occupied habitat that meets BLM's criteria, as established in the RMP, for significant and/or relict plant communities (Exemplary, Ancient, and Rare vegetation communities). Special design, construction, and implementation measures, including relocation of operations by more than 200 meters (656 feet), may be required. Prior to authorizing activities in this area, the operator may be required to submit a plan of development that would demonstrate that habitat would be preserved to maintain the viability of significant or relict plant communities.</p> <p><b>PURPOSE:</b> To conserve significant and/or relict plant communities (e.g., exemplary, ancient, and rare vegetation communities) that are not otherwise protected. To limit damage to exceptional vegetation values from soil and vegetation-disturbing activities.</p> <p><b>EXCEPTION, CSU-14:</b> Standard exception applies.</p> <p><b>EXCEPTION, SSR-14:</b> Activities associated with restoring these areas or reducing threats to them.</p> <p><b>Standard MODIFICATION and WAIVER apply.</b></p>				•
<b>CSU-CO-28</b> <i>(BLM 1991a)</i> <i>Riparian Vegetation Zone</i> BLM Surface: 120,970 acres Split-estate: 13,380 acres	<p><b>STIPULATION:</b> Restrict oil and gas exploration and development, including roads, transmission lines, and storage facilities, to an area beyond the riparian vegetation zone.</p> <p><b>PURPOSE:</b> For the protection of perennial water impoundments and streams and/or riparian/wetland vegetation zones.</p> <p><b>EXCEPTION:</b> This stipulation may be excepted subject to an on-site impact analysis with consideration given to degree of slope, soils, importance to the amount and type of wildlife and fish use, water quality, and other related resource values. This stipulation will not be applied where the BLM Authorized Officer determines that relocation to 200 meters can be applied to protect the riparian system during well sighting.</p> <p><b>Standard MODIFICATION and WAIVER apply.</b></p>	•			

**Table B-3**  
**Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative											
		A	B	C	D								
<b>CSU-15/SSR-15</b> <i>Naturally Occurring Riparian and Wetland Areas, Springs, Water Bodies, and Seeps</i> BLM Surface: 10,280 acres Split-estate: 70 acres	<b>STIPULATION:</b> Surface occupancy or use may be restricted and SSR restrictions applied on lands within 30 meters (100 feet) of the edge of the riparian zone along perennial and intermittent waters and naturally occurring wetlands, springs, and seeps. Surface-disturbing activities may require special engineering design, construction, and implementation measures, including relocation of operations beyond 200 meters (656 feet) to protect water resources.  <b>PURPOSE:</b> To protect perennial and intermittent streams and natural wetlands from increased erosion, weed introduction, and hydrologic alteration.  <b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b>			•									
<b>CSU-16</b> <i>Hydrology Features</i> BLM Surface: 16,480 acres Split-estate: 840 acres	<b>STIPULATION:</b> The CSU restrictions apply from 325 to 500 feet of the hydrology features shown below. Surface occupancy or use may be restricted on lands adjacent to perennial, intermittent, and ephemeral streams; riparian areas, fens, and/or wetlands; and water impoundments. For perennial, intermittent, and ephemeral streams, measure the extent from the ordinary high-water mark (bank-full stage); for wetland features, measure the buffer from the edge of the mapped extent. For unmapped wetlands, determine the vegetation boundary (from which the buffer originates) in the field. Surface-disturbing activities may require special engineering design, construction, and implementation measures, including relocation of operations beyond 200 meters (656 feet), from the extent of water impoundments, streams, riparian areas, and/or wetlands to protect water resources.  <table><tr><th>Water Body Type</th><th>Buffer Width, Feet</th></tr><tr><td>Fens and wetlands</td><td>325 - 500*</td></tr><tr><td>Perennial streams (with or without fish)</td><td>325 - 500 (as measured from ordinary high water mark)</td></tr><tr><td>Lotic or lentic springs and seeps</td><td>325 - 500 (as measured from wetland vegetation edge)</td></tr></table>	Water Body Type	Buffer Width, Feet	Fens and wetlands	325 - 500*	Perennial streams (with or without fish)	325 - 500 (as measured from ordinary high water mark)	Lotic or lentic springs and seeps	325 - 500 (as measured from wetland vegetation edge)				•
Water Body Type	Buffer Width, Feet												
Fens and wetlands	325 - 500*												
Perennial streams (with or without fish)	325 - 500 (as measured from ordinary high water mark)												
Lotic or lentic springs and seeps	325 - 500 (as measured from wetland vegetation edge)												

**Table B-3**  
**Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
	 <p><b>PURPOSE:</b> To maintain the proper functioning condition, including the vegetative, hydrologic and geomorphic functionality of the perennial water body. Protect water quality, fish habitat, and aquatic habitat, and provide a clean, reliable source of water for downstream users. Buffers are expected to indirectly benefit migratory birds, wildlife habitat, amphibians, and other species.</p> <p><b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b></p>				
	Terrestrial Wildlife				
<b>CSU-17/SSR-18</b> <i>Ecological Emphasis Areas</i> Alternative B: 35,250 acres Alternative C: 24,150 acres Alternative D: 177,700 acres	<p><b>STIPULATION:</b> Surface occupancy or use may be restricted and SSR restrictions applied within all or portions of ecological emphasis areas, as follows:</p> <p><u>Alternative B</u></p> <ul style="list-style-type: none"> <li>• Adobe Zones 2-4 (29,250 acres)</li> <li>• Dry Creek Zone 5 (6,000 acres)</li> </ul> <p><u>Alternative C</u></p> <ul style="list-style-type: none"> <li>• La Sal Zones I and 3 (13,270 acres)</li> <li>• Monitor-Potter-Roubideau Zones 5-7, 10, and 11 (10,880 acres)</li> </ul> <p><u>Alternative D</u></p> <ul style="list-style-type: none"> <li>• Adobe Zones I, 3 and 4 (24,170 acres)</li> <li>• Dry Creek Zones I-3 (10,790 acres)</li> <li>• Jumbo Mountain/McDonald Creek Zones I-4 (15,630 acres)</li> <li>• La Sal Zones I-3 (22,350 acres)</li> <li>• Monitor-Potter-Roubideau Zones I-11 (27,320 acres)</li> <li>• Naturita Canyon Zone I (1,510 acres)</li> <li>• Ridgway Zones I and 2 (9,070 acres)</li> <li>• San Miguel Zones I-3, 5, and 7 (17,840 acres)</li> <li>• Sims Mesa (19,650 acres)</li> <li>• Spring Canyon (3,380 acres)</li> </ul>		•	•	•



**Table B-3**  
**Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
	<ul style="list-style-type: none"> <li>• Tabeguache Zones 1, 2, 4-6, 9, and 10 (23,760 acres)</li> <li>• Terror Creek (2,230 acres)</li> </ul> <p><b>PURPOSE:</b> To provide protection for important ecological emphasis areas and migration corridors. Ecological emphasis areas are habitats determined by the BLM UFO to be crucial to plant and animal biodiversity and conservation at the landscape scale. Ecological emphasis areas encompass both cores and migration corridors.</p> <p><b>EXCEPTION, CSU-17:</b> Standard exception applies.</p> <p><b>EXCEPTION, SSR-18:</b> An exception would be provided for habitat improvement projects. Habitat improvements would be demonstrably positive for target species without being detrimental to native species populations.</p> <p><b>Standard MODIFICATION and WAIVER apply.</b></p>				
<b>CSU-18/SSR-19</b> <i>Desert and Rocky Mountain Bighorn Sheep Summer Range</i> BLM Surface: 39,530 acres Split-estate: 1,990 acres	<p><b>STIPULATION:</b> Apply CSU/SSR restrictions to reduce impacts of surface-disturbing activities and operations on bighorn sheep summer range.</p> <p><b>PURPOSE:</b> To reduce impacts on crucial summer range for bighorn sheep.</p> <p><b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b></p>		•		•
	Special Status Plants				
<b>CSU-19/SSR-20</b> <i>BLM Sensitive Plant Species</i> BLM Surface: 3,240 acres Split-estate: 200 acres	<p><b>STIPULATION:</b> Surface occupancy or use may be restricted and SSR restrictions applied within 100 meters (328 feet) of BLM-sensitive plant species. Special design, construction, and implementation measures, including relocation of operations by more than 200 meters (656 feet), may be required. Prior to authorizing activities in this area, the operator may be required to submit a plan of development that would demonstrate that habitat would be preserved to maintain sensitive plant species.</p> <p><b>PURPOSE:</b> To reduce or eliminate threats to BLM sensitive plant species to minimize the likelihood of and need for listing of these species under the ESA.</p>				•

**Table B-3**  
**Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
	<p><b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b></p> <p><b>EXCEPTION, SSR-20:</b> In addition to the standard exception, operations may be authorized if the BLM Authorized Officer determines that the activity would not impair values associated with the maintenance or viability of the species and would minimize or eliminate threats affecting the status of the species.</p>				
<p><b>CSU-20/SSR-21</b></p> <p><i>Plant ESA-Listed Species</i></p> <p>BLM Surface: 6,330 acres</p> <p>Split-estate: 1,270 acres</p>	<p><b>STIPULATION:</b> Surface occupancy or use may be restricted or prohibited and SSR restrictions applied within habitat for federally listed, proposed, or candidate threatened or endangered plant species, as mapped in the RMP, BLM's GIS database, or other maps provided by local, state, federal, or tribal agencies that are analyzed and accepted by the BLM. Special design, construction, and implementation measures, including relocation of operations by more than 200 meters (656 feet), may be required.</p> <p>The lease area may now or hereafter contain habitat for plants listed as threatened or endangered or identified as candidates for listing under the ESA. An inventory of habitat may be required before drilling and construction may commence. The operator may be required to submit a plan of development that demonstrates how the proposed activities will avoid or minimize disruption of threatened and endangered species by siting or prioritizing vegetation clearing, facility construction, and concentrated operational activities (e.g., drilling, completion, and utility installation).</p> <p>The BLM may require modifications to or disapprove proposed activity that is likely to result in jeopardy to the continued existence of a proposed or listed threatened or endangered species, result in the destruction or adverse modification of designated or proposed critical habitat, or contribute to a need to list a proposed or candidate threatened and endangered species. The BLM will not approve any ground-disturbing activity that may affect any such species or critical habitat until it completes its obligations under applicable requirements of the ESA, including completion of any required procedure for conference or consultation.</p>				•

**Table B-3**  
**Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
	<b>PURPOSE:</b> To protect federally listed, proposed, or candidate threatened or endangered plant species and habitat and to promote recovery of the species. The protection buffer reduces dust transport, weed invasion, unauthorized vehicular activities, and chemical and produced-water spills and those effects on special status plant populations. It also reduces impacts on important pollinators and their habitat.  <b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b>				
	Special Status Fish and Aquatic Wildlife				
<b>CSU-21/SSR-23</b> <i>Occupied Native Cutthroat Trout Habitat</i> BLM Surface: 52,580 acres Split-estate: 41,420 acres	<b>STIPULATION:</b> Apply CSU/SSR restrictions within 0.25-mile of occupied habitat for conservation populations (90 percent pure or greater) of native cutthroat trout.  <b>PURPOSE:</b> To protect occupied habitat for a federally threatened species.  <b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b>		•		
<b>CSU-22/SSR-24</b> <i>Occupied Native Cutthroat Trout Habitat</i> BLM Surface: 20,270 acres Split-estate: 15,940 acres	<b>STIPULATION:</b> Apply CSU/SSR restrictions within 500 feet of occupied habitat for conservation populations (90 percent pure or greater) of native cutthroat trout.  <b>PURPOSE:</b> To protect occupied habitat for a federally threatened species.  <b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b>			•	
<b>CSU-23/SSR-26</b> <i>Occupied Native Cutthroat Trout Habitat</i> BLM Surface: 7,010 acres Split-estate: 5,550 acres	<b>STIPULATION:</b> Apply CSU/SSR restrictions between 325 and 500 feet from occupied habitat for conservation populations (90 percent pure or greater) of native cutthroat trout.  <b>PURPOSE:</b> To protect occupied habitat for a federally threatened species.  <b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b>				•



**Table B-3**  
**Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
	Special Status Terrestrial Wildlife				
<b>CSU-24/SSR-27</b> <i>Wildlife ESA-Listed Species (Wildlife and Bird Species' Occupied Habitat)</i> <i>No Data</i>	<p><b>STIPULATION:</b> Surface occupancy or use may be restricted or prohibited within habitat for federally listed, proposed, or candidate threatened or endangered wildlife and bird species (except for Canada lynx), as mapped in the RMP, BLM's GIS database, or other maps provided by local, state, federal, or tribal agencies that are analyzed and accepted by the BLM. Special design, construction, and implementation measures, including relocation of operations by more than 200 meters (656 feet), may be required.</p> <p>The lease area may now or hereafter contain habitat for wildlife listed as threatened or endangered or identified as candidates for listing under the ESA. An inventory of habitat may be required before drilling and construction may commence. The operator may be required to submit a plan of development that demonstrates how the proposed activities will avoid or minimize disruption of threatened and endangered species by siting or prioritizing vegetation clearing, facility construction, and concentrated operational activities (e.g., drilling, completion, and utility installation).</p> <p>The BLM may require modifications to or disapprove proposed activity that is likely to result in jeopardy to the continued existence of a proposed or listed threatened or endangered species, result in the destruction or adverse modification of designated or proposed critical habitat, or contribute to a need to list a proposed or candidate threatened and endangered species. The BLM will not approve any ground-disturbing activity that may affect any such species or critical habitat until it completes its obligations under applicable requirements of the ESA, including completion of any required procedure for conference or consultation.</p> <p><b>PURPOSE:</b> To maintain the integrity of habitat for federally listed, proposed, or candidate threatened or endangered wildlife species and to promote recovery of the species.</p> <p><b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b></p>			•	

**Table B-3**  
**Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
	<p><b>MODIFICATION, SSR-27:</b> Standard modifications apply. Also, for unavoidable habitat losses, modification of the CSU area may be issued provided the following criteria are all satisfied:</p> <ol style="list-style-type: none"> <li>1. Section 7 of the ESA consultation is completed and USFWS recommended conservation measures are fully applied;</li> <li>2. No direct “take” of protected species occurs as a result of the action; and</li> <li>3. Lost or degraded habitat is fully restored through on- or off-site mitigation, as determined by the BLM.</li> </ol>				
<p><b>CSU-25/SSR-29</b>  Wildlife ESA-Listed Species (Yellow-billed Cuckoo Habitat)  BLM Surface:  6,080 acres  Split-estate:  1,370 acres</p>	<p><b>STIPULATION:</b> Surface occupancy or use may be restricted or prohibited and SSR restrictions applied within habitat for the following federally listed, proposed, or candidate threatened or endangered wildlife species, as mapped in the RMP, BLM’s GIS database, or other maps provided by local, state, federal, or tribal agencies that are analyzed and accepted by the BLM: within yellow-billed cuckoo habitat. Special design, construction, and implementation measures, including relocation of operations by more than 200 meters (656 feet), may be required.</p> <p>The lease area may now or hereafter contain habitat for wildlife listed as threatened or endangered or identified as candidates for listing under the ESA. An inventory of habitat may be required before drilling and construction may commence. The operator may be required to submit a plan of development that demonstrates how the proposed activities will avoid or minimize disruption of threatened and endangered species by siting or prioritizing vegetation clearing, facility construction, and concentrated operational activities (e.g., drilling, completion, and utility installation).</p> <p>The BLM may require modifications to or disapprove proposed activity that is likely to result in jeopardy to the continued existence of a proposed or listed threatened or endangered species, result in the destruction or adverse modification of designated or proposed critical habitat, or contribute to a need to list a proposed or candidate threatened and endangered species. The BLM will not approve any ground-disturbing activity that may affect any</p>				•

**Table B-3**  
**Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
	<p>such species or critical habitat until it completes its obligations under applicable requirements of the ESA, including completion of any required procedure for conference or consultation.</p> <p><b>PURPOSE:</b> To maintain the integrity of habitat for a federal candidate species.</p> <p><b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b></p>				
<p><b>CSU-26/SSR-30</b>  Wildlife ESA-Listed Species (Canada Lynx Habitat)  BLM Surface:  3,860 acres  Split-estate:  2,830 acres</p>	<p><b>STIPULATION:</b> Surface occupancy or use may be restricted or prohibited and SSR restrictions applied within habitat for the following federally listed, proposed, or candidate threatened or endangered wildlife species, as mapped in the RMP, BLM's GIS database, or other maps provided by local, state, federal, or tribal agencies that are analyzed and accepted by the BLM: in mapped or identified Canada lynx habitat in Lynx Analysis Units and to any activities that would negatively alter connectivity between and within Lynx Analysis Units. Special design, construction, and implementation measures, including relocation of operations by more than 200 meters (656 feet), may be required.</p> <p>The lease area may now or hereafter contain habitat for wildlife listed as threatened or endangered or identified as candidates for listing under the ESA. An inventory of habitat may be required before drilling and construction may commence. The operator may be required to submit a plan of development that demonstrates how the proposed activities will avoid or minimize disruption of threatened and endangered species by siting or prioritizing vegetation clearing, facility construction, and concentrated operational activities (e.g., drilling, completion, and utility installation).</p> <p>The BLM may require modifications to or disapprove proposed activity that is likely to result in jeopardy to the continued existence of a proposed or listed threatened or endangered species, result in the destruction or adverse modification of designated or proposed critical habitat, or contribute to a need to list a proposed or candidate threatened and endangered species. The BLM will not</p>		•		



**Table B-3**  
**Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
	<p>approve any ground-disturbing activity that may affect any such species or critical habitat until it completes its obligations under applicable requirements of the ESA, including completion of any required procedure for conference or consultation.</p> <p><b>PURPOSE:</b> To maintain the integrity of habitat for federally listed species (Canada lynx) and promote recovery of the species.</p> <p><b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b></p>				
<p><b>CSU-27/SSR-3 I</b></p> <p><i>Wildlife ESA-Listed Species (Canada Lynx Habitat)</i></p> <p>BLM Surface: 3,860 acres</p> <p>Split-estate: 2,840 acres</p>	<p><b>STIPULATION:</b> Surface occupancy or use may be restricted or prohibited and SSR restrictions applied within habitat for the following federally listed, proposed, or candidate threatened or endangered wildlife species, as mapped in the RMP, BLM's GIS database, or other maps provided by local, state, federal, or tribal agencies that are analyzed and accepted by the BLM: in mapped or identified Lynx Linkage Corridors and Canada lynx habitat in Lynx Analysis Units and to any activities that would negatively alter connectivity between and within Lynx Analysis Units. Special design, construction, and implementation measures, including relocation of operations by more than 200 meters (656 feet), may be required.</p> <p>The lease area may now or hereafter contain habitat for wildlife listed as threatened or endangered or identified as candidates for listing under the ESA. An inventory of habitat may be required before drilling and construction may commence. The operator may be required to submit a plan of development that demonstrates how the proposed activities will avoid or minimize disruption of threatened and endangered species by siting or prioritizing vegetation clearing, facility construction, and concentrated operational activities (e.g., drilling, completion, and utility installation).</p> <p>The BLM may require modifications to or disapprove proposed activity that is likely to result in jeopardy to the continued existence of a proposed or listed threatened or endangered species, result in the destruction or adverse modification of designated or proposed critical habitat, or</p>				•

**Table B-3**  
**Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
	<p>contribute to a need to list a proposed or candidate threatened and endangered species. The BLM will not approve any ground-disturbing activity that may affect any such species or critical habitat until it completes its obligations under applicable requirements of the ESA, including completion of any required procedure for conference or consultation.</p> <p><b>PURPOSE:</b> To maintain the integrity of habitat for federally listed species (Canada lynx) and promote recovery of the species.</p> <p><b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b></p>				
<p><b>CSU-28/SSR-33</b>  <i>Gunnison Sage-grouse Breeding (Non-lek) Habitat</i>            BLM Surface:                14,700 acres            Split-estate:                14,930 acres</p>	<p><b>STIPULATION:</b> Surface occupancy or use may be restricted and SSR restrictions applied in suitable habitat that is within 4.0 miles of an active Gunnison sage-grouse lek or within mapped Gunnison sage-grouse nesting and early brood-rearing habitat. To the degree possible, avoid construction of permanent structures or facilities.</p> <p><b>PURPOSE:</b> To protect Gunnison sage-grouse non-lek breeding habitats and activities including nesting, brood-rearing, and summer-fall habitats.</p> <p><b>EXCEPTION, CSU-28:</b> Standard exception would apply.</p> <p><b>EXCEPTION, SSR-33:</b> An exception would be provided for habitat treatments designed to benefit Gunnison sage-grouse and minimally disturbing structures (e.g., fences and nonmotorized trails) provided they fully comply with the disturbance guidelines in Appendix I of the Gunnison Sage-grouse Rangewide Conservation Plan (Gunnison Sage-grouse Rangewide Steering Committee 2005).</p> <p><b>Standard MODIFICATION and WAIVER apply.</b></p>			•	

**Table B-3**  
**Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
<b>CSU-29/SSR-34</b> <i>Gunnison Sage-grouse Breeding (Non-lek) Habitat</i> BLM Surface: 14,700 acres Split-estate: 14,930 acres	<b>STIPULATION:</b> Surface occupancy or use may be restricted and SSR restrictions applied in suitable habitat that is within 4.0 miles of a Gunnison sage-grouse lek to protect Gunnison sage-grouse mapped seasonal habitats (non-lek breeding, late brood-rearing, and winter habitat) or suitable sagebrush habitat. Conservation measures may be imposed as necessary to maintain high-quality Gunnison sage-grouse habitat, reduce fragmentation or loss of habitat within or between population areas, reduce cumulative effects within population areas, and reduce disturbance to Gunnison sage-grouse use in the area.  <b>PURPOSE:</b> Maintain the integrity of important Gunnison sage-grouse habitat to maintain sustainable local populations.  <b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b>				•
<b>CSU-30/SSR-35</b> <i>Raptor Breeding Habitat</i> BLM Surface: 40,910 acres Split-estate: 8,900 acres	<b>STIPULATION:</b> Apply CSU/SSR restrictions within the following areas: <ul style="list-style-type: none"> <li>• Special Status Raptors (including Mexican spotted owl): within 1.0 mile of nest sites.</li> <li>• Non-Special Status Raptors (except American kestrel): within 0.5-mile of nest sites.</li> </ul> <b>PURPOSE:</b> To protect special status raptor nests and surrounding habitat components, structure, and integrity. To comply with the Migratory Bird Treaty Act.  <b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b>		•		
<b>CSU-31</b> <i>Raptor Nest Sites</i> BLM Surface: 2,510 acres Split-estate: 270 acres	<b>STIPULATION:</b> <u>Special Status Raptors:</u> Apply CSU restrictions within the following areas: <ul style="list-style-type: none"> <li>• Bald Eagle: Within 0.25-mile of bald eagle roost or nest sites.</li> <li>• Raptors (golden eagle, osprey, accipiters, falcons [except kestrel], buteos, and owls): within 0.125-mile of nest sites;</li> <li>• Peregrine Falcons: within 0.25-mile of cliff nesting complex.</li> </ul> <u>Non-Special Status Raptors identified in the Migratory Bird Treaty Act (except American kestrel, red-tailed hawk, and great-horned owl):</u> Apply CSU restrictions within 330 feet of			•	



**Table B-3**  
**Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
	active nest sites and associated alternate nests. <b>PURPOSE:</b> To protect special status raptor nests and surrounding habitat components and structure. To comply with the Migratory Bird Treaty Act. <b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b>				
<b>CSU-32/SSR-37</b> <i>Raptor Breeding Habitat (Accipiters, Falcons [Except Kestrel], Buteos, and Owls [Except Mexican Spotted Owl])</i> BLM Surface: 21,790 acres Split-estate: 6,750 acres	<b>STIPULATION:</b> Apply CSU/SSR restrictions within 1.0-mile of nest sites. <b>PURPOSE:</b> To protect special status raptor nests and surrounding habitat components, structure, and integrity. To comply with the Migratory Bird Treaty Act. <b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b>				•
<b>CSU-33/SSR-39</b> <i>Bald Eagle Habitat (Winter Concentration and Communal Roosts)</i> BLM Surface: 10,180 acres Split-estate: 1,720 acres	<b>STIPULATION:</b> Apply CSU/SSR restrictions within bald eagle habitat to protect winter concentration areas and communal roost sites. Incorporate applicable conservation measures from the USFWS National Bald Eagle Management Guidelines. <b>PURPOSE:</b> Maintain long-term availability of suitable bald eagle habitat. <b>EXCEPTION, CSU-33:</b> Standard exception applies. <b>EXCEPTION, SSR-39:</b> The BLM UFO Field Manager may grant an exception to this stipulation if an environmental analysis indicates that the proposed or conditioned activities would not affect the long term suitability or utility of habitat features or diminish opportunities for natural floodplain functions. Surface disturbance and occupation may also be authorized in the event that established impacts on habitat values would be compensated or offset to the satisfaction of the BLM. <b>Standard MODIFICATION and WAIVER apply.</b>		•		•

**Table B-3**  
**Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
<b>CSU-34/SSR-40</b> <i>Mexican Spotted Owl</i> <i>Suitable Breeding Habitat</i> <i>No Data</i>	<p><b>STIPULATION:</b> Apply CSU/SSR restrictions to Mexican spotted owl breeding habitat as defined in the Mexican spotted owl recovery plan. Manage in accordance with the current Mexican spotted owl recovery plan. The BLM UFO Field Manager may require the proponent/applicant to submit a plan of development that would demonstrate that impacts on Mexican spotted owl habitat have been avoided to the extent practicable.</p> <p><b>PURPOSE:</b> To avoid impacts on habitat and maintain the availability of suitable breeding and brood rearing habitat as defined in the Mexican Spotted Owl recovery plan to promote recovery.</p> <p><b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b></p>				•
<b>CSU-35/SSR-42</b> <i>Wildlife BLM Sensitive Species (Gunnison and White-tailed Prairie Dogs)</i> BLM Surface: 6,480 acres Split-estate: 710 acres	<p><b>STIPULATION:</b> Surface occupancy or use may be restricted and SSR restrictions applied within habitat for the following BLM sensitive wildlife species: within 150 feet of active Gunnison and white-tailed prairie dog towns. Special design, construction, and implementation measures, including relocation of operations by more than 200 meters (656 feet), may be required. The operator may be required to submit a plan of development that reduces or eliminates threats to BLM identified sensitive species by siting or prioritizing vegetation clearing, facility construction, and concentrated operational activities (e.g., drilling, completion, and utility installation).</p> <p><b>PURPOSE:</b> To reduce or eliminate threats to BLM sensitive wildlife species to minimize the likelihood of and need for listing under the ESA.</p> <p><b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b></p>				•
<b>CSU-36/SSR-43</b> <i>Wildlife BLM Sensitive Species (Active Kit Fox Dens)</i> <i>No Data</i>	<p><b>STIPULATION:</b> Surface occupancy or use may be restricted and SSR restrictions applied within habitat for the following BLM sensitive wildlife species: within 0.25-mile of active kit fox dens. Special design, construction, and implementation measures, including relocation of operations by more than 200 meters (656 feet), may be required. The operator may be required to submit a plan of development</p>		•		

**Table B-3**  
**Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
	<p>that reduces or eliminates threats to BLM identified sensitive species by siting or prioritizing vegetation clearing, facility construction, and concentrated operational activities (e.g., drilling, completion, and utility installation).</p> <p><b>PURPOSE:</b> To reduce or eliminate threats to BLM sensitive wildlife species to minimize the likelihood of and need for listing under the ESA.</p> <p><b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b></p>				
<p><b>CSU-37/SSR-44</b>  Wildlife BLM  Sensitive Species  (Active Kit Fox Dens)  No Data</p>	<p><b>STIPULATION:</b> Surface occupancy or use may be restricted and SSR restrictions applied within habitat for the following BLM sensitive wildlife species: within 200 meters (656 feet) of active kit fox dens. Special design, construction, and implementation measures, including relocation of operations by more than 200 meters (656 feet), may be required. The operator may be required to submit a plan of development that reduces or eliminates threats to BLM identified sensitive species by siting or prioritizing vegetation clearing, facility construction, and concentrated operational activities (e.g., drilling, completion, and utility installation).</p> <p><b>PURPOSE:</b> To reduce or eliminate threats to BLM sensitive wildlife species to minimize the likelihood of and need for listing under the ESA.</p> <p><b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b></p>				•
<p><b>CSU-38/SSR-45</b>  Wildlife Bat: Bat Roost Sites and Winter Hibernacula  BLM Surface:  2,900 acres</p>	<p><b>STIPULATION:</b> Surface occupancy or use may be restricted and SSR restrictions applied within 0.25-mile radius of the entrance of maternity roosts or hibernacula of federally listed, BLM sensitive, and Colorado State Species of Concern bat species', as mapped in the BLM's GIS database or other maps provided by local, state, federal, or tribal agencies that are analyzed and accepted by the BLM.</p> <p><b>PURPOSE:</b> To protect bat populations and crucial habitats.</p> <p><b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b></p>			•	



**Table B-3**  
**Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
<b>CSU-39/SSR-47</b> <i>Wildlife Bat: Bat Roost Sites and Winter Hibernacula (Colorado State Species of Concern)</i> BLM Surface: 2,900 acres	<p><b>STIPULATION:</b> Surface occupancy or use may be restricted and SSR restrictions applied within 0.25-mile radius of the entrance of maternity roosts or hibernacula of Colorado State Species of Concern bat species, as mapped in the BLM's GIS database or other maps provided by local, state, federal, or tribal agencies that are analyzed and accepted by the BLM.</p> <p><b>PURPOSE:</b> Protection of known sensitive bat species' maternity roosts and hibernacula.</p> <p><b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b></p>				•
<b>CSU-10/SSR-10</b> <i>Hydrology River</i> BLM Surface: 26,990 acres Split-estate: 1,060 acres	<p><b>STIPULATION:</b> Surface occupancy or use may be restricted and SSR restrictions may be applied within 402 meters (1,320 feet) of the ordinary high-water mark (bank-full stage) or within 100 meters (328 feet) of the 100-year floodplain (whichever area is greatest) on the following major rivers: Gunnison, North Fork Gunnison, San Miguel, Uncompahgre, and Dolores Rivers.</p> <p><b>PURPOSE:</b> To protect river corridors that provide: a) water quality/filtering values; b) important riparian values; c) special status fish and wildlife species habitat; d) waterfowl and shorebird production values; e) valuable amphibian habitat; and f) high scenic and recreation values of these major rivers.</p> <p><b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b></p>			•	
	Cultural Resources				
<b>CSU-40/SSR-48</b> <i>Allocation to Traditional Use</i> No Data	<p><b>STIPULATION:</b> Apply CSU/SSR restrictions within 200 meters (656 feet) around eligible or potentially eligible sites allocated to Traditional Use. In addition, consider visual impacts that projects may have on sites allocated to this use, and apply appropriate mitigation, which may include redesign.</p> <p><b>PURPOSE:</b> For the protection of traditional cultural uses, values and resources.</p> <p><b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b></p>			•	

**Table B-3**  
**Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
<b>CSU-41/SSR-50</b> <i>Tabeguache Pueblos Area and Tabeguache Canyon</i> BLM Surface: 21,110 acres	<b>STIPULATION:</b> Apply CSU/SSR restrictions within the Tabeguache Pueblos area and Tabeguache Canyon.  <b>PURPOSE:</b> For the protection of cultural resource values.  <b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b>				•
<b>CSU-42/SSR-51</b> <i>Sites Listed on the National or State Register of Historic Places</i> BLM Surface: 480 acres	<b>STIPULATION:</b> Apply CSU/SSR restrictions within 100 meters (328 feet) of sites listed on the National or State Registers of Historic Places.  <b>PURPOSE:</b> For the protection of cultural resource values.  <b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b>			•	
<b>CSU-43/SSR-53</b> <i>Cultural</i> <i>No Data</i>	<b>STIPULATION:</b> Surface occupancy or use may be restricted and SSR restrictions applied due to historic properties and/or resources protected under the National Historic Preservation Act, American Indian Religious Freedom Act, Native American Graves Protection and Repatriation Act, Executive Order 13007, or other statutes and executive orders. Special design, construction, and implementation measures, including relocation of operations by more than 200 meters (656 feet), may be required.  This lease or project area may be found to contain historic properties and/or resources protected under the National Historic Preservation Act, American Indian Religious Freedom Act, Native American Graves Protection and Repatriation Act, Executive Order 13007, or other statutes and executive orders. The BLM will not approve any ground-disturbing activities that may affect any such properties or resources until it completes its obligations (e.g., State Historic Preservation Office and tribal consultation) under applicable requirements of the National Historic Preservation Act and other authorities. The BLM may require modification to exploration or development proposals to protect such properties, or disapprove any activity that is likely to result in adverse effects that cannot be successfully avoided, minimized, or mitigated.		•		•

**Table B-3**  
**Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
	<b>PURPOSE:</b> To protect cultural resource sites that may be damaged from inadvertent, unauthorized, or authorized uses.  <b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b>				
<b>CSU-44/SSR-54</b> <i>Area of Archaeological Significance</i> BLM Surface: 31,870 acres	<b>STIPULATION:</b> Apply CSU/SSR restrictions to emphasize site avoidance and project redesign during development in the area of the Lower Uncompahgre Plateau between the Dry Creek Basin and Roubideau Creek.  <b>PURPOSE:</b> For the protection of cultural resource values.  <b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b>				•
	Paleontological Resources				
<b>CSU-45</b> <i>Paleontological</i>	<b>STIPULATION:</b> Surface occupancy or use may be restricted due to paleontological resources. Special design, construction, and implementation measures, including relocation of operations by more than 200 meters (656 feet), may be required. An inventory of paleontological resources may be required before construction and drilling may commence. The BLM Authorized Officer may require that a qualified paleontologist be present to monitor operations during surface disturbing activities.  <b>PURPOSE:</b> To protect scientific information that may be damaged from inadvertent or authorized uses.  <b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b>		•		•
	Visual Resources				
<b>CSU-46/SSR-55</b> <i>Visual: VRM Class II and III</i> BLM Surface: 598,500 acres Split-estate: 223,000 acres	<b>STIPULATION:</b> Surface occupancy or use may be restricted and SSR restrictions applied in VRM Class II and III areas. Special design, construction, and implementation measures, including relocation of operations by more than 200 meters (656 feet), may be required.  <b>PURPOSE:</b> To manage lands in a manner to protect the quality of the scenic (visual) values.  <b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b>		•		



**Table B-3**  
**Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
<b>CSU-47</b> Vistas No Data	<p><b>STIPULATION:</b> Apply CSU restrictions to BLM and split-estate lands visible from important vistas and travel corridors:</p> <ul style="list-style-type: none"> <li>• Jumbo Mountain</li> <li>• Youngs Peak</li> <li>• “H” Hill</li> <li>• Flanks of the West Elks</li> <li>• Needle Rock ACEC</li> <li>• Beyond 1.0 mile of: <ul style="list-style-type: none"> <li>○ West Elk Scenic Byway (Colorado Highways 92 and 133 and Gunnison County Road 12)</li> <li>○ 3100 Road</li> <li>○ North Road</li> <li>○ Crawford Road</li> <li>○ Back River Road</li> </ul> </li> </ul> <p><b>PURPOSE:</b> To protect the visual features visible from scenic corridors and viewpoints.</p> <p><b>EXCEPTION, MODIFICATION, and WAIVER:</b> None; no exceptions, modifications, or waivers would be allowed.</p>		B.1		
	Coal				
<b>CSU-CO-25</b> <i>(BLM 1991a)</i> <i>Federally Leased Coal</i> BLM Surface: 6,560 acres Split-estate: 11,110 acres	<p><b>STIPULATION:</b> Where oil and gas operations are proposed within the area of federally leased coal, relocate them outside the area to be mined or so as to accommodate room and pillar mining operations.</p> <p><b>PURPOSE:</b> To protect (1) the coal resource; (2) the mine workings used to access and extract the coal resource; and (3) the safety of the miners.</p> <p><b>WAIVER:</b> This stipulation may be waived without a plan amendment if the lessee agrees that the drilling of a well will be subject to the following conditions: (1)(a) well must be plugged when the mind approaches within 500 feet of the well and re-entered or re-drilled upon completion of the mining operation; (b) well must be plugged in accordance with Mine Safety and Health Administration (formerly Mine Enforcement and Safety Administration) Informational Report 1052; (c) operator will provide accurate location of where the casing intercepts the coal by providing a coal</p>	•			

**Table B-3**  
**Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
	operator will provide accurate location of where the casing intercepts the coal by providing a directional and deviation survey of the well to the coal operator; or (2) relocate will into a permanent pillar or outside the area to be mined. A suspension of operations and production will be considered when the well is plugged and a new well is to be drilled after mining operations move through the location.  <b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b>				
<b>CSU-48</b> <i>Geology: Coal Mine</i> BLM Surface: 6,560 acres Split-estate: 11,110 acres	<b>STIPULATION:</b> Surface occupancy or use may be restricted due to surface or underground coal mines. Special design, construction, and implementation measures, including relocation of operations by more than 200 meters (656 feet), may be required. Operations proposed within the area of an approved surface or underground coal mine will be relocated outside the area to be mined or to accommodate room and pillar and long wall mining operations. This stipulation does not apply to operations that capture or pipe methane from a mine for beneficial use.  <b>PURPOSE:</b> To protect surface or underground coal mines.  <b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b>		•	•	•
	Fluid Minerals				
<b>CSU-49</b> <i>Recreation Park</i> BLM Surface: 9,220 acres Split-estate: 7,270 acres	<b>STIPULATION:</b> Surface occupancy or use may be restricted where the BLM holds the fluid mineral rights under the following areas: <ul style="list-style-type: none"><li>• Curecanti National Recreation Area</li><li>• State parks</li><li>• State wildlife areas</li></ul> Special design, construction, and implementation measures, including relocation of operations by more than 200 meters (656 feet), may be required.  <b>PURPOSE:</b> Protect high-value wildlife habitat and recreation values associated with designated National Recreation Areas, State Parks and Wildlife Areas.  <b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b>			•	

**Table B-3**  
**Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
	Recreation and Visitor Services				
<b>CSU-50</b> <i>Recreation SRMAs</i> BLM Surface: 44,020 acres	<b>STIPULATION:</b> Apply CSU restrictions in the following SRMAs: <ul style="list-style-type: none"> <li>• Dry Creek RMZs 1 and 3</li> <li>• San Miguel River RMZ 4</li> </ul> <b>PURPOSE:</b> To protect recreation outcomes and setting prescriptions. <b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b>				•
<b>CSU-51</b> <i>Recreation ERMAs</i> BLM Surface: 73,310 acres	<b>STIPULATION:</b> Apply CSU restrictions in ERMAs. <ul style="list-style-type: none"> <li>• Burn Canyon</li> <li>• Kinikin Hills</li> <li>• North Delta</li> <li>• Paradox Valley</li> </ul> <b>PURPOSE:</b> To avoid negative impacts on targeted recreational opportunities. <b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b>				•
	Areas of Critical Environmental Concern				
<b>CSU-52/SSR-57</b> <i>Special Designation ACEC</i> BLM Surface: 29,360 acres	<b>STIPULATION:</b> Surface occupancy or use may be restricted and SSR restrictions applied in the following ACECs: <ul style="list-style-type: none"> <li>• Adobe Badlands (6,370 acres)</li> <li>• Fairview South (210 acres)</li> <li>• San Miguel River (22,780 acres)</li> </ul> <b>PURPOSE:</b> To protect the relevant and important values of each ACEC. <b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b>			•	



**Table B-3**  
**Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
	Wild and Scenic Rivers				
<b>CSU-53/SSR-60</b> <i>Special Designation WSR ("Scenic" or "Recreational")</i> BLM Surface: 32,050 acres Split-estate: 1,800 acres	<p><b>STIPULATION:</b> Surface occupancy or use may be restricted and SSR restrictions applied within the WSR study corridors, as defined in the Uncompahgre Wild and Scenic River Suitability Report (<b>Appendix P</b>) of segments determined to have the classification of "scenic" or "recreational:"</p> <ul style="list-style-type: none"> <li>• Gunnison River Segment 2</li> <li>• Roubideau Creek Segment 2</li> <li>• Deep Creek</li> <li>• West Fork Terror Creek</li> <li>• Beaver Creek</li> <li>• Naturita Creek</li> <li>• San Miguel River Segment 1</li> <li>• San Miguel River Segment 3</li> <li>• San Miguel River Segment 5</li> <li>• San Miguel River Segment 6</li> <li>• Tabeguache Creek Segment 2</li> <li>• Lower Dolores River</li> <li>• North Fork Mesa Creek</li> <li>• Dolores River Segment 1b</li> <li>• Dolores River Segment 2</li> <li>• Ice Lake Creek Segment 2</li> <li>• La Sal Creek Segment 1</li> <li>• La Sal Creek Segment 2</li> <li>• Lion Creek Segment 2</li> <li>• Spring Creek</li> </ul> <p><b>PURPOSE:</b> To protect WSR outstandingly remarkable values, free-flowing nature, and water quality of eligible or suitable river segments and their consequent recreational, social, economic, and environmental significance.</p> <p><b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b></p>		•		

**Table B-3**  
**Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
<b>CSU-54</b> <i>Special Designation WSR ("Recreational")</i> BLM Surface: 22,660 acres Split-estate: 440 acres	<p><b>STIPULATION:</b> Surface occupancy or use may be restricted within the WSR study corridor, as defined in the Uncompahgre Wild and Scenic River Suitability Report (<b>Appendix P</b>), of the following segments determined to have the classification of "recreational:"</p> <ul style="list-style-type: none"> <li>• Beaver Creek</li> <li>• San Miguel River Segment 1</li> <li>• San Miguel River Segment 3</li> <li>• San Miguel River Segment 5</li> <li>• San Miguel River Segment 6</li> <li>• Dolores River Segment 2</li> <li>• La Sal Creek Segment 2</li> </ul> <p><b>PURPOSE:</b> To protect WSR outstandingly remarkable values, free-flowing nature, and water quality of eligible or suitable river segments and their consequent recreational, social, economic, and environmental significance.</p> <p><b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b></p>				•
	National Trails and Byways				
<b>CSU-55</b> <i>Special Designation Trail (Old Spanish National Historic Trail)</i> BLM Surface: 62,220 acres	<p><b>STIPULATION:</b> Surface occupancy or use may be restricted from 805 to 8,047 meters (0.50- to 5.0 miles) of the centerline of the following: Old Spanish National Historic Trail. Special design, construction, and implementation measures, including relocation of operations by more than 200 meters (656 feet), may be required.</p> <p><b>PURPOSE:</b> To protect the physical evidence of the trail, associated cultural and historic resources, and integrity of the viewshed associated with the trail.</p> <p><b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b></p>		•		•

**Table B-3**  
**Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
<b>CSU-56</b> <i>Special Designation Trail (Old Spanish National Historic Trail)</i> BLM Surface: 67,430 acres	<b>STIPULATION:</b> Surface occupancy or use may be restricted from 50 to 8,047 meters (164 feet to 5 miles) of the centerline of the following: Old Spanish National Historic Trail. Special design, construction, and implementation measures, including relocation of operations by more than 200 meters (656 feet), may be required.  <b>PURPOSE:</b> To protect the physical evidence of the trail, associated cultural and historic resources, and integrity of the viewshed associated with the trail.  <b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b>			•	
<b>CSU-57</b> <i>Scenic Byways</i> BLM Surface: 16,390 acres Split-estate: 6,010 acres	<b>STIPULATION:</b> Surface occupancy or use may be restricted within 402 meters (0.25-mile) of designated scenic byways. Special design, construction, and implementation measures, including relocation of operations by more than 200 meters (656 feet), may be required to protect the scenic (visual) values.  <b>PURPOSE:</b> To protect scenic views in driving corridors.  <b>EXCEPTION:</b> An exception could be granted if: (a) a viewshed analysis indicates no impairment of the visual resources from the driving corridor; or (b) the action is determined to be consistent and compatible with protection or enhancement of the resource values, or the use would provide suitable opportunities for public enjoyment of these resources.  <b>Standard MODIFICATION and WAIVER apply.</b>			•	
<b>CSU-58</b> <i>Special Designation Byway (Scenic Byways)</i> BLM Surface: 34,680 acres Split-estate: 12,440 acres	<b>STIPULATION:</b> Surface occupancy or use may be restricted within 805 meters (0.50-mile) of designated scenic byways. Special design, construction, and implementation measures, including relocation of operations by more than 200 meters (656 feet), may be required to protect the scenic (visual) values.  <b>PURPOSE:</b> To protect the quality of the scenic (visual) values of scenic, historic, or backcountry byways.  <b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b>				•

<sup>1</sup>The sum of acres with CSU stipulations in this table may add up to more than the total acres with CSU stipulations presented in Chapter 2, as some areas may overlap.



**Table B-4**  
**Timing Limitation (TL) Stipulations Applicable to Fluid Mineral Leasing and**  
**Surface-disturbing Activities**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
	Soils and Water				
<b>TL-UB-1</b> <i>(BLM 1989a)</i>  <i>Highly Erodible and/or</i> <i>Saline Soil Areas</i>  BLM Surface: 28,670 acres  Split-estate: 4,940 acres	<p><b>STIPULATION:</b> Prohibit surface-disturbing activities from March 1 to May 31 when saturated soils are most vulnerable to damage.</p> <p><b>PURPOSE:</b> To protect watersheds from salinity infusions and to protect highly erodible soil areas where low soil productivity would prolong or disallow revegetation.</p> <p><b>EXCEPTION:</b> This stipulation may be waived, excepted, or modified by the BLM Authorized Officer if the lessee can demonstrate that operations can be conducted without causing unacceptable impacts on salinity and highly erodible soil areas. The stipulation will not be waived, excepted, or modified if it is determined that the activity would cause accelerated erosion that would result in excessive amounts of salinity being contributed to the Colorado River. Variances could be allowed if soils are not saturated during the typical high soil moisture period when these soils are most susceptible to damage (March 1 through May 31), or if impacts could not be mitigated, or if site-specific conditions do not warrant the stipulation (e.g., small amount of disturbance or short duration of operations).</p> <p>Resource information for split-estate lands has not been verified by the BLM. Verification will occur during a review of Applications for Permit to Drill (APDs). On-site inspection and consultation with the surface owner and operator may reveal that (1) the impacts addressed by the stipulation will be avoided or mitigated to an acceptable level, or (2) the resources of concern are not present. Upon either of these determinations by the BLM Authorized Officer, the stipulations can be waived, modified, or excepted without public notice other than that provided for the APD. If, after on-site inspection and consultation with the private surface landowner, it is determined by the BLM Authorized Officer that conditions necessary to avoid impacts on private resources addressed by these stipulations, the impacts will be assessed. If, based upon such assessment, the BLM Authorized Officer makes a decision to substantially change one or more stipulations, a 30-day public review period will be provided in</p>	•			

**Table B-4**  
**Timing Limitation (TL) Stipulations Applicable to Fluid Mineral Leasing and Surface-disturbing Activities**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
	addition to the public notice period for receipt of the APD. (These two 30-day notice and review periods may overlap.)  <b>Standard MODIFICATION and WAIVER apply.</b>				
<b>TL-1</b> <i>Saturated Soils</i> BLM Surface: 675,800 acres	<b>STIPULATION:</b> Prohibit surface occupancy and surface-disturbing activities in areas where soils are saturated or that demonstrate rutting of 2 inches or more. The BLM Authorized Officer would determine when soil conditions are appropriate for activities to resume.  <b>PURPOSE:</b> To maintain site stability, soil productivity, prevent accelerated erosion, and increase reclamation success.  <b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b>		•		
<b>TL-2</b> <i>Saturated Soils</i> BLM Surface: 675,800 acres	<b>STIPULATION:</b> Prohibit surface occupancy and surface-disturbing activities in areas where soils are saturated or that demonstrate rutting of 3 inches or more. The BLM Authorized Officer would determine when soil conditions are appropriate for activities to resume.  <b>PURPOSE:</b> To maintain site stability, soil productivity, prevent accelerated erosion, and increase reclamation success.  <b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b>				•
	<b>Fish and Aquatic Wildlife</b>				
<b>TL-3</b> <i>Wildlife Native and Sport</i> BLM Surface: 4,170 acres Split-estate: 2,030 acres	<b>STIPULATION:</b> Prohibit in-stream channel work within occupied fisheries, as mapped in the RMP, BLM's GIS database, or other maps provided by local, state, federal, or tribal agencies that are analyzed and accepted by the BLM, during the following periods:  • Spring spawning period: April 1 to August 1 (rainbow trout, cutthroat trout, and native warm water fish [flannelmouth sucker, bluehead sucker, and roundtail chub]), and Paiute and mottled sculpin  • Fall spawning period: October 1 to November 30 (brown and brook trout)  <b>PURPOSE:</b> To protect redds (egg masses) in the gravel and emerging fry.		•		

**Table B-4**  
**Timing Limitation (TL) Stipulations Applicable to Fluid Mineral Leasing and**  
**Surface-disturbing Activities**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
	<b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b>				
<b>TL-4</b> <i>Wildlife Coldwater Sport Fish</i> BLM Surface: 4,170 acres Split-estate: 2,030 acres	<b>STIPULATION:</b> Prohibit in-stream channel work within occupied fisheries, as mapped in the RMP, BLM's GIS database, or other maps provided by local, state, federal, or tribal agencies that are analyzed and accepted by the BLM, during the following period: <ul style="list-style-type: none"> <li>• Spring spawning period: April 1 to June 15 (rainbow and cutthroat trout)</li> <li>• Fall spawning period: October 1 to November 30 (brown and brook trout)</li> </ul> <b>PURPOSE:</b> To protect redds (egg masses) in the gravel and emerging fry. <b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b> <b>EXCEPTION for Non-Fluid Mineral Activities:</b> In addition to the standard exception, this stipulation may be excepted for the following: <ul style="list-style-type: none"> <li>• In-channel restoration or enhancement work designed to improve stream habitat conditions</li> <li>• Riparian plantings</li> <li>• Temporary disturbances of less than 0.1-acre with appropriate BMPs</li> </ul>			•	
<b>TL-5</b> <i>Wildlife Coldwater Sport Fish</i> BLM Surface: 4,170 acres Split-estate: 2,030 acres	<b>STIPULATION:</b> Prohibit in-stream channel work within occupied fisheries, as mapped in the RMP, BLM's GIS database, or other maps provided by local, state, federal, or tribal agencies that are analyzed and accepted by the BLM, during the following period: <ul style="list-style-type: none"> <li>• Spring spawning period: April 1 to July 15 (native cutthroat trout, rainbow trout, and native warm water fish [flannemouth sucker, bluehead sucker, and roundtail chub])</li> </ul> <b>PURPOSE:</b> To protect redds (egg masses) in the gravel and emerging fry. <b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b>				•



**Table B-4**  
**Timing Limitation (TL) Stipulations Applicable to Fluid Mineral Leasing and**  
**Surface-disturbing Activities**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
	<b>EXCEPTION for Non-Fluid Mineral Activities:</b> In addition to the standard exception, this stipulation may be excepted for the following: <ul style="list-style-type: none"> <li>• In-channel restoration or enhancement work designed to improve stream habitat conditions</li> <li>• Riparian plantings</li> <li>• Temporary disturbances of less than 0.1-acre with appropriate BMPs</li> </ul>				
	Terrestrial Wildlife				
<b>TL-CO-9</b> <i>(BLM 1991a)</i>  <i>Big Game Species</i> <i>(Mule Deer, Elk, Pronghorn Antelope, and Bighorn Sheep)</i>  BLM Surface: 267,480 acres Split-estate: 15,880 acres	<b>STIPULATION:</b> Prohibit surface-occupancy in big game crucial winter habitat (now termed “severe and winter concentration areas”), including severe big game winter range or other definable winter ranges as mapped by the CPW, from December 1 to April 30.  <b>PURPOSE:</b> To protect big game during severe winter periods.  <b>EXCEPTION:</b> Under mild winter conditions, the last 60 days of the seasonal limitation period may be suspended. Determine severity of the winter on the basis of snow depth, snow crusting, daily mean temperature, and whether the animals were concentrated on the crucial winter range during winter months. This limitation may or may not apply to work requiring a Sundry Notice pending environmental analysis of any operational or production aspects.  <b>Standard MODIFICATION and WAIVER apply.</b>	•			
<b>TL-6</b> <i>Wildlife Big Game Winter</i>  BLM Surface: 495,360 acres Split-estate: 94,890 acres	<b>STIPULATION:</b> Prohibit surface use and surface-disturbing and disruptive activities during the following time period(s) in big game crucial winter habitat, as mapped in the RMP, BLM’s GIS database, or other maps provided by local, state, federal, or tribal agencies that are analyzed and accepted by the BLM: Crucial winter range, severe winter range, and winter concentration areas. <ul style="list-style-type: none"> <li>• Elk mule deer, and pronghorn antelope: December 1 to April 30</li> <li>• Moose: November 15 to May 30</li> <li>• Rocky Mountain and desert bighorn sheep: November 1 to April 30.</li> </ul>	•			

**Table B-4**  
**Timing Limitation (TL) Stipulations Applicable to Fluid Mineral Leasing and Surface-disturbing Activities**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
	<p>Note that some travel closures and restrictions may also apply in specific geographic areas.</p> <p><b>PURPOSE:</b> To reduce disruption of big game during the winter season in crucial winter habitat.</p> <p><b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b></p> <p><b>EXCEPTION:</b> The following are additional exceptions to this stipulation for non-fluid mineral activities:</p> <ul style="list-style-type: none"> <li>• CPW-mapped “winter range”, which is fairly extensive and comprises a considerable proportion of the resource area.</li> <li>• Under certain circumstances, habitat improvement projects (e.g., early spring and late fall fuel treatments), provided improvements are demonstrably positive for target species without being detrimental to wildlife communities.</li> </ul> <p>Other factors to consider for exceptions:</p> <ul style="list-style-type: none"> <li>• Winter conditions (such as snow cover and crusting) at the project site and vicinity</li> <li>• Predictable, short-term (1 week) storm forecasts for the project area</li> <li>• Period of winter in which the exception is requested (e.g., early winter or late winter)</li> <li>• Project site location relative to the size and spatial arrangement of crucial winter range, open roads and trails, and other background or historical disturbance</li> <li>• Length of time that activities would encroach on the period of the winter range stipulation</li> <li>• Number of vehicle trips per day in and out of the work site</li> <li>• Time of day that activity occurs (after dark is generally prohibited)</li> <li>• Actual big game use of the area and herd status/ activities;</li> <li>• Cumulative impacts on big game (such as other activities in the area)</li> <li>• Any other site-specific or general concerns, as appropriate</li> </ul>				

**Table B-4**  
**Timing Limitation (TL) Stipulations Applicable to Fluid Mineral Leasing and**  
**Surface-disturbing Activities**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
<b>TL-7</b> Wildlife Big Game Winter BLM Surface: 493,960 acres Split-estate: 94,880 acres	<p><b>STIPULATION:</b> Prohibit surface use and surface-disturbing and disruptive activities during the following time period(s) in big game crucial winter habitat, as mapped in the RMP, BLM's GIS database, or other maps provided by local, state, federal, or tribal agencies that are analyzed and accepted by the BLM: crucial winter range, severe winter range, and winter concentration areas.</p> <ul style="list-style-type: none"> <li>• Elk and mule deer: January 1 to March 31</li> </ul> <p><b>PURPOSE:</b> To reduce disruption of big game during the winter season in crucial winter habitat.</p> <p><b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b></p> <p><b>EXCEPTION for Non-Fluid Mineral Activities:</b> In addition to the standard exception, this stipulation may be excepted for the following:</p> <ul style="list-style-type: none"> <li>• CPW-mapped "winter range", which is fairly extensive and comprises a considerable proportion of the resource area</li> <li>• Under certain circumstances, habitat improvement projects (e.g., early spring and late fall fuel treatments), provided improvements are demonstrably positive for target species without being detrimental to wildlife communities</li> </ul> <p>Other factors to consider for exceptions:</p> <ul style="list-style-type: none"> <li>• Winter conditions (such as snow cover and crusting) at the project site and vicinity</li> <li>• Predictable, short-term (1 week) storm forecasts for the project area</li> <li>• Period of winter in which the exception is requested (e.g., early winter or late winter)</li> <li>• Project site location relative to the size and spatial arrangement of crucial winter range, open roads and trails, and other background or historical disturbance</li> <li>• Length of time that activities would encroach on the period of the winter range stipulation</li> <li>• Number of vehicle trips per day in and out of the work site;</li> <li>• Time of day that activity occurs (after dark is generally prohibited)</li> </ul>			•	



**Table B-4**  
**Timing Limitation (TL) Stipulations Applicable to Fluid Mineral Leasing and**  
**Surface-disturbing Activities**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
	<ul style="list-style-type: none"> <li>Actual big game use of the area and herd status/ activities;</li> <li>Cumulative impacts on big game (such as other activities in the area)</li> <li>Any other site-specific or general concerns, as appropriate</li> </ul>				
<b>TL-8</b> Wildlife Big Game Winter BLM Surface: 495,350 acres Split-estate: 94,890 acres	<p><b>STIPULATION:</b> Prohibit surface use and surface-disturbing and disruptive activities during the following time period(s) in big game crucial winter habitat, as mapped in the RMP, BLM's GIS database, or other maps provided by local, state, federal, or tribal agencies that are analyzed and accepted by the BLM: crucial winter range, severe winter range and winter concentration areas.</p> <ul style="list-style-type: none"> <li>Elk, mule deer, pronghorn antelope, and moose: December 1 to April 30</li> <li>Rocky Mountain and desert bighorn sheep: November 1 to April 30</li> </ul> <p><b>PURPOSE:</b> To reduce disruption of big game during the winter season in crucial winter habitat.</p> <p><b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b></p> <p><b>MODIFICATION (additional):</b> The BLM UFO Field Manager may modify the size and time frames of this stipulation if CPW monitoring information indicates that current animal use patterns are inconsistent with dates established for animal occupation, or under mild winter conditions for the last 60 days of the closure. Determine severity of the winter on the basis of snow depth, snow crusting, daily mean temperatures, and whether animals were concentrated on the winter range during the winter months. Modifications could be authorized if the proposed action could be conditioned so as not to interfere with critical habitat function or compromise animal condition. A modification may also be approved if the proponent, BLM, and CPW agree to compensation that satisfactorily offset detrimental impacts on big game winter range or its use, or an agreement can be reached where by a Colorado Oil and Gas Conservation Commission wildlife mitigation plan can be accommodated consistent with established RMP objectives and decisions.</p>				•

**Table B-4**  
**Timing Limitation (TL) Stipulations Applicable to Fluid Mineral Leasing and**  
**Surface-disturbing Activities**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
<b>TL</b> <i>(BLM 1989a; 1991a)</i> <i>Big Game Birthing</i> <i>Areas (by Species)</i> BLM Surface: 4,510 acres Split-estate: 8,200 acres	<p><b>STIPULATION:</b> Restrict surface-disturbing activities in the following areas:</p> <ul style="list-style-type: none"> <li>• Elk calving (now termed “production”): April 16 to June 30 (Stipulation: TL-CO-10 and TL-UB-05)</li> <li>• Pronghorn antelope fawning: May 1 to July 15 (Stipulation: TL-CO-11)</li> <li>• Rocky Mountain bighorn sheep lambing: May 1 to July 15 (Stipulation: TL-CO-12)</li> <li>• Desert bighorn sheep lambing: March 16 to May 30 (Stipulation: TL-CO-14)</li> </ul> <p><b>PURPOSE:</b> To protect important seasonal reproduction areas for big game, to minimize disturbance of animals during birthing and rearing periods.</p> <p><b>EXCEPTION:</b> When it is determined through a site-specific environmental analysis that specific actions would not interfere with critical habitat function or compromise animal condition within the project vicinity, the restriction may be altered or removed.</p> <p><b>Standard MODIFICATION and WAIVER apply.</b></p>	•			
<b>TL-9</b> <i>Wildlife Big Game</i> <i>Production</i> BLM Surface: 3,020 acres Split-estate: 8,200 acres	<p><b>STIPULATION</b> Prohibit surface use and surface-disturbing and disruptive activities during the following time period(s) in big game production areas, as mapped in the RMP, BLM’s GIS database, or other maps provided by local, state, federal, or tribal agencies that are analyzed and accepted by the BLM:</p> <ul style="list-style-type: none"> <li>• Elk: May 15 to June 30</li> <li>• Pronghorn antelope: May 1 to July 15</li> <li>• Rocky Mountain bighorn sheep:               <ul style="list-style-type: none"> <li>○ May 1 to July 15 for lambing range</li> <li>○ October 15 to December 15 for rutting grounds.</li> </ul> </li> <li>• Desert bighorn sheep:               <ul style="list-style-type: none"> <li>○ March 15 to June 15 for lambing range</li> <li>○ August 1 to September 30 for rutting grounds</li> </ul> </li> <li>• Moose: May 15 to July 15</li> </ul> <p>Note that some travel closures and restrictions may also apply in specific geographic areas.</p>	•			

**Table B-4**  
**Timing Limitation (TL) Stipulations Applicable to Fluid Mineral Leasing and**  
**Surface-disturbing Activities**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
	<p><b>PURPOSE:</b> To reduce disruption of big game during the parturition and young-rearing period.</p> <p><b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b></p> <p><b>EXCEPTION for Non-Fluid Mineral Activities:</b> In addition to the standard exception, this stipulation may be excepted for the following:</p> <ul style="list-style-type: none"> <li>• Project site location relative to the size and spatial arrangement of reproduction range, open roads and trails, and other background or historical disturbance</li> <li>• Length of time that activities would encroach on the period of the restriction period</li> <li>• Number of vehicle trips per day in and out of the work site</li> <li>• Time of day that activity occurs (after dark is generally prohibited)</li> <li>• Actual big game use of the area and herd status/ activities</li> <li>• Cumulative impacts on big game (such as other activities in the area)</li> <li>• Any other site-specific or general concerns, as appropriate</li> </ul>				
<p><b>TL-10</b></p> <p><i>Wildlife Big Game Production</i></p> <p>BLM Surface: 3,020 acres</p> <p>Split-estate: 8,200 acres</p>	<p><b>STIPULATION:</b> Prohibit surface use and surface-disturbing activities during the following time period in big game production areas, as mapped in the RMP, BLM's GIS database, or other maps provided by local, state, federal, or tribal agencies that are analyzed and accepted by the BLM:</p> <ul style="list-style-type: none"> <li>• Elk: May 15 to June 15</li> </ul> <p><b>PURPOSE:</b> To reduce disruption of big game during the parturition and young-rearing period.</p> <p><b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b></p> <p><b>EXCEPTION for Non-Fluid Mineral Activities:</b> In addition to the standard exception, this stipulation may be excepted for the following:</p> <ul style="list-style-type: none"> <li>• Project site location relative to the size and spatial arrangement of reproduction range, open roads and trails, and other background or historical disturbance</li> </ul>			•	



**Table B-4**  
**Timing Limitation (TL) Stipulations Applicable to Fluid Mineral Leasing and**  
**Surface-disturbing Activities**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
	<ul style="list-style-type: none"> <li>Length of time that activities would encroach on the period of the restriction period</li> <li>Number of vehicle trips per day in and out of the work site;</li> <li>Time of day that activity occurs (after dark is generally prohibited)</li> <li>Actual big game use of the area and herd status/ activities</li> <li>Cumulative impacts on big game (such as other activities in the area)</li> <li>Any other site-specific or general concerns, as appropriate</li> </ul>				
<b>TL-II</b> <i>Wildlife Big Game Production</i> BLM Surface: 3,020 acres Split-estate: 8,200 acres	<p><b>STIPULATION:</b> Prohibit surface occupancy and surface-disturbing and disruptive activities in mapped big game production areas as follows:</p> <ul style="list-style-type: none"> <li>Elk, pronghorn antelope, Rocky Mountain bighorn sheep, and moose: April 15 to June 30</li> <li>Desert bighorn sheep: February 1 to May 1.</li> </ul> <p><b>PURPOSE:</b> To reduce disruption of big game during the parturition and young rearing period.</p> <p><b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b></p> <p><b>MODIFICATION for Non-Fluid Mineral Activities:</b> In addition to the standard modification, the BLM UFO Field Manager may modify the size and time frames of this stipulation if CPW monitoring information indicates that current animal use patterns are inconsistent with dates established for animal occupation. Modifications could be authorized if the proposed action could be conditioned so as not to interfere with critical habitat function or compromise animal condition. A modification may also be approved if the proponent, BLM, and CPW agree to compensation that satisfactorily offset detrimental impacts on big game production or habitat condition, or an agreement can be reached where by a Colorado Oil and Gas Conservation Commission wildlife mitigation plan can be accommodated consistent with established RMP objectives and decisions.</p>				•

**Table B-4**  
**Timing Limitation (TL) Stipulations Applicable to Fluid Mineral Leasing and Surface-disturbing Activities**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
<b>TL-12</b> Wildlife Turkey BLM Surface: 18,030 acres Split-estate: 8,640 acres	<p><b>STIPULATION:</b> Prohibit surface use and surface-disturbing and disruptive activities within wild turkey habitat, as mapped in the RMP, BLM's GIS database, or other maps provided by local, state, federal, or tribal agencies that are analyzed and accepted by the BLM, during the following time period):</p> <ul style="list-style-type: none"> <li>• Wild turkey winter habitat from December 1 to April 1</li> </ul> <p><b>PURPOSE:</b> To prevent disruption of wild turkeys during crucial periods.</p> <p><b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b></p>		•		•
<b>TL-13</b> Wildlife Migratory Bird BLM Surface: 675,800 acres Split-estate: 240,230 acres	<p><b>STIPULATION:</b> Prohibit surface use and surface-disturbing and disruptive activities, including vegetation-altering projects, on lands where nesting migratory birds are present, during the following time period: April 1 to July 15.</p> <p><b>PURPOSE:</b> To minimize disruption of migratory bird nesting activity.</p> <p><b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b></p> <p><b>EXCEPTION for Non-Fluid Mineral Activities:</b> In addition to the standard exception, this stipulation may be excepted for small-scale actions that disturb less than 5 acres of priority habitat. Under certain circumstances, an exception would be provided for habitat-improvement projects. Habitat improvements would be demonstrably positive for target species without being detrimental to migratory bird communities.</p> <p><b>MODIFICATION for Non-Fluid Mineral Activities:</b> In addition to the standard modification, this stipulation may be modified if surveys are conducted during the breeding season by qualified wildlife biologists and no active nests of priority species are found; then activities may continue.</p>		•		•

**Table B-4**  
**Timing Limitation (TL) Stipulations Applicable to Fluid Mineral Leasing and**  
**Surface-disturbing Activities**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
	Special Status Terrestrial Wildlife				
<b>TL-14</b> <i>Yellow-billed Cuckoo</i> <i>Habitat</i> BLM Surface: 41,180 acres Split-estate: 9,880 acres	<b>STIPULATION:</b> Prohibit surface occupancy and surface-disturbing activities within 100 meters (328 feet) of yellow-billed cuckoo habitat within riparian areas from May 15 to August 5.  <b>PURPOSE:</b> To protect occupied habitat for a federal candidate species.  <b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b>			•	
<b>TL-CO-15</b> (BLM 1991a) <i>Grouse</i> BLM Surface: 180 acres Split-estate: 4,980 acres	<b>STIPULATION:</b> Prohibit surface occupancy and surface-disturbing activities in grouse (sage-grouse and mountain sharp-tailed grouse) crucial winter habitat (now termed “severe and winter concentration areas”) from December 16 to March 15.  <b>PURPOSE:</b> Prevent disruption of sage-grouse and mountain sharp-tailed grouse during the winter period.  <b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b>	•			
<b>TL-15</b> <i>Gunnison Sage-grouse</i> <i>Winter Habitat</i> BLM Surface: 180 acres Split-estate: 4,970 acres	<b>STIPULATION:</b> Prohibit surface occupancy and surface-disturbing and disruptive activities within occupied winter habitat for Gunnison sage-grouse from October 1 to March 15. If winter habitats are not mapped or identified, this stipulation would apply to the entire area within 6.0 miles of leks (courtship areas).  <b>PURPOSE:</b> Prevent disruption of Gunnison sage-grouse during the winter period.  <b>EXCEPTION:</b> The BLM UFO Field Manager may grant an exception if an environmental analysis and coordination with CPW indicate that the proposed action could be conditioned so as not adversely affect winter distribution and survival. An exception could also be granted if the proponent, BLM, and CPW negotiate compensation that would satisfactorily offset the anticipated losses of winter habitat or overwintering activities. Actions designed to enhance the long term utility or availability of suitable winter habitat may be excepted.		•		



**Table B-4**  
**Timing Limitation (TL) Stipulations Applicable to Fluid Mineral Leasing and Surface-disturbing Activities**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
	<p><b>MODIFICATION:</b> The BLM UFO Field Manager may modify the size of the timing limitation area if an environmental analysis indicates that the proposed action could be conditioned so as not to adversely affect winter distribution or survival. The BLM UFO Field Manager may modify the size of the timing limitation area if an environmental analysis indicates that the proposed action could be conditioned so as not to adversely affect winter distribution or survival.</p> <p><b>WAIVER:</b> The BLM UFO Field Manager may grant a waiver if CPW determines that the described lands are incapable of serving the long term requirements of sage- grouse winter habitat and that these ranges no longer warrant consideration as components of sage-grouse winter habitat.</p>				
<p><b>TL-16</b>  <i>Gunnison Sage-grouse Winter Habitat</i>            BLM Surface:                180 acres            Split-estate:                4,970 acres</p>	<p><b>STIPULATION:</b> Prohibit surface occupancy and surface-disturbing and disruptive activities in mapped important Gunnison sage-grouse winter range, as defined by the BLM and CPW, from December 1 to March 15.</p> <p><b>PURPOSE:</b> Prevent disruption of Gunnison sage-grouse during the winter period.</p> <p><b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b></p> <p><b>EXCEPTION for Non-Fluid Mineral Activities:</b> In addition to the standard exception, this stipulation may be excepted for actions designed to enhance the long-term utility or availability of suitable winter habitat.</p>				•
<p><b>TL-17</b>  <i>Gunnison Sage-grouse Breeding (Non-lek) Habitat</i>            BLM Surface:                51,390 acres            Split-estate:                21,040 acres</p>	<p><b>STIPULATION:</b> Prohibit surface use and surface-disturbing and disruptive activities within 6.0 miles of Gunnison sage-grouse leks from March 1 to June 30.</p> <p><b>PURPOSE:</b> To protect Gunnison sage-grouse non-lek breeding habitats including nesting, brood-rearing, and summer-fall habitats.</p> <p><b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b></p>		•		

**Table B-4**  
**Timing Limitation (TL) Stipulations Applicable to Fluid Mineral Leasing and**  
**Surface-disturbing Activities**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
<b>TL-18</b> <i>Gunnison Sage-grouse Breeding (Lek and Non-lek) Habitat</i> BLM Surface: 16,030 acres Split-estate: 20,310 acres	<b>STIPULATION:</b> Prohibit surface use and surface-disturbing and disruptive activities in suitable habitat that is within mapped nesting habitat or within 4.0 miles of active Gunnison sage-grouse leks (if nesting habitat is not mapped) from March 1 to June 30.  <b>PURPOSE:</b> Prevent disruption of reproductive activity during the production period.  <b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b>  <b>EXCEPTION for Non-Fluid Mineral Activities:</b> In addition to the standard exception, this stipulation may be excepted for actions designed to enhance the long-term utility or availability of suitable nest habitat.				•
<b>TL-CO-18</b> <i>(BLM 1991a)</i> <i>Raptor Nesting and Fledgling Habitat (Golden Eagle, Accipiters, Falcons [Except the Kestrel], Buteos, and Owls)</i> BLM Surface: 3,280 acres Split-estate: 120 acres	<b>STIPULATION:</b> Prohibit surface occupancy and use within 0.25-mile of a nest site from February 1 to August 15.  <b>MODIFICATION:</b> During years when a nest site is unoccupied or unoccupied by or after May 15, the seasonal limitation may be suspended. It may also be suspended once the young have fledged and dispersed from the nest.  <b>Standard EXCEPTION and WAIVER apply.</b>	•			
<b>TL-CO-20</b> <i>(BLM 1991a)</i> <i>Osprey Nesting and Fledgling Habitat</i> BLM Surface: 10 acres Split-estate: 0 acres	<b>STIPULATION:</b> Osprey nesting and fledgling habitat - April 1 to August 31. The sensitivity of osprey to human associated disturbance activities requires a half-mile buffer zone to avoid nest abandonment.  <b>PURPOSE:</b> To protect breeding special status raptors and young and to comply with the Migratory Bird Treaty Act.  <b>EXCEPTION:</b> During years when a nest site is unoccupied or unoccupied by or after May 15, the seasonal limitation may be suspended. It may also be suspended once the young have fledged and dispersed from the nest.  <b>Standard MODIFICATION and WAIVER apply.</b>	•			

**Table B-4**  
**Timing Limitation (TL) Stipulations Applicable to Fluid Mineral Leasing and**  
**Surface-disturbing Activities**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
<b>TL-CO-22</b> <i>(BLM 1991a)</i> <i>Bald Eagle Nesting</i> <i>Habitat</i> BLM Surface: 740 acres Split-estate: 100 acres	<p><b>STIPULATION:</b> Prohibit surface use within 0.5-mile of nest a site from December 15 to June 15.</p> <p><b>PURPOSE:</b> To prevent disruption of nesting. This time period is extremely sensitive to human-disturbance activities and may cause nest abandonment and desertion of long established territories.</p> <p><b>EXCEPTION:</b> During years when a nest site is unoccupied by or after May 15, the timing limitation may be suspended. It may also be suspended once the young have fledged and dispersed from the nest.</p> <p><b>Standard MODIFICATION and WAIVER apply.</b></p>	•			
<b>TL-CO-24</b> <i>(BLM 1991a)</i> <i>Peregrine Falcon Cliff</i> <i>Nesting Complex</i> BLM Surface: 4,860 acres Split-estate: 40 acres	<p><b>STIPULATION:</b> Prohibit surface use within 0.5-mile of peregrine falcon cliff nesting complex from March 16 to July 31.</p> <p><b>PURPOSE:</b> To prevent abandonment and desertion of established territories.</p> <p><b>EXCEPTION:</b> The following exception would apply only after formal ESA Section 7 consultation with USFWS was completed. During years when a nest site is unoccupied or unoccupied by or after May 15, the seasonal limitation may be suspended. It may also be suspended once the young have fledged and dispersed from the nest.</p> <p><b>Standard MODIFICATION and WAIVER apply.</b></p>	•			
<b>TL-CO-19</b> <i>(BLM 1991a)</i> <i>Ferruginous Hawk</i> <i>No Data</i>	<p><b>STIPULATION:</b> Prohibit use within 1.0 mile of nesting and fledgling habitat from February 1 to August 15.</p> <p><b>PURPOSE:</b> Required due to the sensitivity of the ferruginous hawk to human associated disturbance activities.</p> <p><b>MODIFICATION:</b> Exception for ferruginous hawks nesting habitat. During years when a nest site is unoccupied or unoccupied by or after May 15, the seasonal limitation may be suspended. It may also be suspended once the young have fledged and dispersed from the nest.</p> <p><b>Standard EXCEPTION and WAIVER apply.</b></p>	•			



**Table B-4**  
**Timing Limitation (TL) Stipulations Applicable to Fluid Mineral Leasing and**  
**Surface-disturbing Activities**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
<b>TL-19</b> <i>Raptor Breeding and Nesting Sites</i> BLM Surface: 14,350 acres Split-estate: 2,770 acres	<p><b>STIPULATION:</b> Prohibit surface use and surface-disturbing and disruptive activities as follows:</p> <ul style="list-style-type: none"> <li>• <u>Special Status Raptors:</u> Within 0.50-mile of active special status raptor nest sites and associated alternate nests from nest territory establishment to dispersal of young from nest (see <b>Table B-8</b>, Raptor Species Breeding Periods).</li> <li>• <u>Non-Special Status Raptors (<i>Except American Kestrel</i>):</u> Within 0.25-mile of active raptor nest sites and associated alternate nests from nest territory establishment to dispersal of young from nest (see Table B-8, Raptor Species Breeding Periods).</li> </ul> <p><b>PURPOSE:</b> To protect breeding special status raptors and young and to comply with the Migratory Bird Treaty Act.</p> <p><b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b></p> <p><b>EXCEPTION:</b> In addition to the standard exception, this stipulation may be excepted in cases where topographic configuration ensures an effective visual/ noise barrier between disruptive activities and the nest site.</p> <p>An exception would be provided for nests that have been unoccupied by raptors for at least three consecutive breeding seasons. To qualify for an exception, bald eagle nests would require at least five consecutive breeding seasons of eyrie vacancy. During years when a nest site is unoccupied on or after May 15, the timing limitation may be suspended. An exception is provided for mineral leasing routine maintenance and operations.</p> <p><b>MODIFICATION:</b> In addition to the standard modification, a modification may be provided for the latter end of the seasonal restriction if it is determined that young birds have fledged <i>and</i> dispersed from the nest site.</p>		•		

**Table B-4**  
**Timing Limitation (TL) Stipulations Applicable to Fluid Mineral Leasing and**  
**Surface-disturbing Activities**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
<b>TL-20</b> Wildlife Sensitive Raptor Nest and Wildlife Raptor Nest BLM Surface: 14,350 acres Split-estate: 2,770 acres	<p><b>STIPULATION:</b> <i>Wildlife Sensitive Raptor Nest Timing Limitation:</i> Prohibit surface use within an 805-meter (0.50-mile) radius of active raptor nests, as mapped in the RMP, BLM's GIS database, or other maps provided by local, state, federal, or tribal agencies that are analyzed and accepted by the BLM, during the following time periods, or until fledging and dispersal of young:</p> <ul style="list-style-type: none"> <li>• Bald Eagle: from November 15 to July 31</li> <li>• Golden Eagle: from December 15 to July 15</li> <li>• Ferruginous Hawk: from February 1 to August 15</li> <li>• Peregrine and Prairie Falcon: from March 15 to July 31</li> <li>• Northern Goshawk from March 1 to August 31</li> <li>• Burrowing Owl: 0.25-mile radius around active nests from March 15 to August 15</li> </ul> <p><i>Wildlife Raptor Nest Timing Limitation:</i> No surface use is allowed within a 402-meter (0.25-mile) radius of active raptor nests, as mapped in the RMP, BLM's GIS database, or other maps provided by local, state, federal, or tribal agencies that are analyzed and accepted by the BLM, during the following time period(s), or until fledging and dispersal of young:</p> <ul style="list-style-type: none"> <li>• Osprey: from April 1 to August 31</li> <li>• Red-tailed Hawk: from February 15 to August 15</li> <li>• Swainson's Hawk, Cooper's Hawk, Sharp-shinned Hawk, and Northern Harrier: from April 1 to August 15</li> <li>• Great Horned Owl: from February 1 to August 15</li> <li>• Other Owls and Raptors (excluding Kestrel): from March 1 to August 15</li> </ul> <p><b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b></p> <p><b>EXCEPTION for Non-Fluid Mineral Activities:</b> In addition to the standard exception, the BLM UFO Field Manager may also grant an exception if the nest is unattended or remains unoccupied by May 15 of the project year. An exception may be granted to these dates by the BLM UFO Field Manager, consistent with policies derived from federal administration of the Migratory Bird Treaty Act.</p>				•

**Table B-4**  
**Timing Limitation (TL) Stipulations Applicable to Fluid Mineral Leasing and**  
**Surface-disturbing Activities**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
	<b>MODIFICATION for Non-Fluid Mineral Activities:</b> In addition to the standard modification, a modification may be granted if the nest has remained unoccupied for a minimum of five years or conditions have changed such that there is no reasonable likelihood of site occupation over a minimum 10-year period.				
TL-CO-23 (BLM 1991a) Bald Eagle Winter Roost Sites BLM Surface: 4,630 acres Split-estate: 580 acres	<b>STIPULATION:</b> Prohibit surface use within 0.50-mile of bald eagle winter roost sites from November 16 to April 15.  <b>PURPOSE:</b> The sensitivity of bald eagles to human disturbance activities.  <b>EXCEPTION:</b> If there is partial or complete visual screening of the area of activity, the primary zone around the roost site may be reduced to 0.25-mile.  <b>Standard MODIFICATION and WAIVER apply.</b>	•			
TL-21 Bald Eagle Winter Roost Sites BLM Surface: 4,630 acres Split-estate: 580 acres	<b>STIPULATION:</b> Prohibit surface use and surface-disturbing activities within an 805-meter (0.50-mile) radius of an active bald eagle winter roost, as mapped in the RMP, BLM's GIS database, or other maps provided by local, state, federal, or tribal agencies that are analyzed and accepted by the BLM, from November 15 to March 15.  <b>PURPOSE:</b> To prevent disruption of wintering bald eagles at communal roosts.  <b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b>  <b>MODIFICATION for Non-Fluid Mineral Activities:</b> In addition to the standard modification, a modification may be granted if the site has failed to support roosting activities over a minimum five year period, or if the site conditions have changed such that there is no reasonable likelihood of site occupation over a minimum 10-year period.				•



**Table B-4**  
**Timing Limitation (TL) Stipulations Applicable to Fluid Mineral Leasing and Surface-disturbing Activities**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
<b>TL-SJ-7</b> <i>(BLM 1991a)</i> <i>Bald Eagle Winter Concentration Areas</i> BLM Surface: 3,750 acres Split-estate: 120 acres	<b>STIPULATION:</b> Prohibit surface use from December 1 to April 15.  <b>PURPOSE:</b> To protect bald eagles from activities that would cause abandonment of winter concentration areas.  <b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b>	•			
<b>TL-UB-3</b> <i>(BLM 1989a)</i> <i>Bald Eagle Winter Concentration Areas</i> BLM Surface: 8,650 acres Split-estate: 2,650 acres	<b>STIPULATION:</b> Prohibit development (e.g., exploration and drilling) from December 1 to April 30.  <b>PURPOSE:</b> To protect bald eagles from activities that would cause abandonment of winter concentration areas.  <b>EXCEPTION:</b> This stipulation may be waived, excepted, or modified by the BLM Authorized Officer if the lessee can demonstrate that operations can be conducted without causing unacceptable impacts on wintering bald eagles.  Resource information for split-estate lands has not been verified by the BLM. Verification will occur during review of Applications for Permit to Drill APDs). On-site inspection and consultation with the surface owner and operator may reveal that (1) the impacts addressed by the stipulation will be avoided or mitigated to an acceptable level, or (2) the resources of concern are not present. Upon either of these determinations by the BLM Authorized Officer, the stipulations can be waived, modified, or excepted without public notice other than that provided APD. If, after on-site inspection and consultation with the private surface landowner, it is determined by the BLM Authorized Officer that conditions necessary to avoid impacts on private resources would adversely impact the public resources addressed by these stipulations, the impacts will be assessed. If, based upon such assessment, the BLM Authorized Officer makes a decision to substantially change or waive one or more stipulations, a 30-day public review period will be provided in addition to the public notice period for receipt of the APD. (These two 30-day notice and review-periods may overlap.)  <b>Standard MODIFICATION and WAIVER apply.</b>	•			

**Table B-4**  
**Timing Limitation (TL) Stipulations Applicable to Fluid Mineral Leasing and**  
**Surface-disturbing Activities**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
<b>TL-22</b> <i>Bald Eagle Winter Concentration Areas</i> BLM Surface: 10,180 acres Split-estate: 1,720 acres	<p><b>STIPULATION:</b> Prohibit surface use and surface-disturbing and disruptive activities within bald eagle winter concentration areas from November 15 to April 1.</p> <p><b>PURPOSE:</b> To protect bald eagle crucial winter habitats and to comply with the Bald and Golden Eagle Protection Act.</p> <p><b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b></p> <p><b>EXCEPTION:</b> In addition to the standard exception, restriction timeframes may be adjusted on a case-by-case basis depending on weather conditions and the severity of winter, provided eagles are not observed in the proposed action area.</p>		•		•
<b>TL-CO-21</b> <i>(BLM 1991a)</i> <i>Mexican Spotted Owl Nesting and Fledgling Habitat</i> <i>No Data</i>	<p><b>STIPULATION:</b> Prohibit surface use in core area of territory from February 1 to July 31. Mexican spotted owl habitat is restricted by use of a timing limitation applied to core areas within the owl habitat territory. The territories are by definition of two types: (1) territory in which an owl(s) has been spotted, but no nests or roosts have been confirmed, and (2) territory in which there is confirmed nesting, feeding, and roosting activity. The territory of a Mexican spotted owl is thought to be about 2,000 acres and does not overlap with another individual's (or pair's) territory. Within the territory is a core area of 450 acres where there have been sightings only ([1] above), or 1,480 acres where there are confirmed nests and/or roosts ([2] above). A proposed oil and gas operation within the remainder of the territory (2,000 acres minus 450 or 1,480 acres) will be analyzed prior to permit approval and mitigated for compatibility with the owl habitat.</p> <p><b>PURPOSE:</b> To protect Mexican spotted owl crucial breeding habitats and to comply with the Mexican spotted owl recovery plan to promote recovery.</p> <p><b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b></p>	•			

**Table B-4**  
**Timing Limitation (TL) Stipulations Applicable to Fluid Mineral Leasing and**  
**Surface-disturbing Activities**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
<b>TL-23</b> Wildlife Mexican Spotted Owl (Suitable Breeding Habitat) No Data	<p><b>STIPULATION:</b> Prohibit surface use and surface-disturbing and disruptive activities in mapped suitable Mexican spotted owl breeding habitat, as mapped in the RMP, BLM's GIS database, or other maps provided by local, state, federal, or tribal agencies, including as defined in the Mexican spotted owl recovery plan, that are analyzed and accepted by the BLM, from March 1 to August 31.</p> <p><b>PURPOSE:</b> To prevent disturbance of Mexican spotted owl during breeding and brood rearing and to promote recovery as defined in the Mexican Spotted Owl Recovery Plan.</p> <p><b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b></p>				•
<b>TL-24</b> Gunnison and White- tailed Prairie Dog BLM Surface: 7,790 acres Split-estate: 870 acres	<p><b>STIPULATION:</b> Prohibit surface use and surface-disturbing and disruptive activities within 300 feet of active prairie dog colonies from March 1 to July 15.</p> <p><b>PURPOSE:</b> To protect prairie dog reproduction.</p> <p><b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b></p>		•		
<b>TL-25</b> Gunnison and White- tailed Prairie Dog BLM Surface: 7,790 acres Split-estate: 870 acres	<p><b>STIPULATION:</b> Prohibit surface use and surface-disturbing and disruptive activities within 300 feet of active prairie dog colonies from April 1 to July 15.</p> <p><b>PURPOSE:</b> To protect prairie dog reproduction.</p> <p><b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b></p>				•
<b>TL-26</b> Active Kit Fox Dens No Data	<p><b>STIPULATION:</b> Prohibit surface use and surface-disturbing activities within 400 feet of active kit fox dens nesting and feeding habitat areas from February 15 to August 30 (Wilson and Ruff 1999).</p> <p><b>PURPOSE:</b> To protect breeding kit foxes.</p> <p><b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b></p>			•	



**Table B-4**  
**Timing Limitation (TL) Stipulations Applicable to Fluid Mineral Leasing and**  
**Surface-disturbing Activities**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
<b>TL-27</b> <i>Active Kit Fox Dens</i> <i>No Data</i>	<p><b>STIPULATION:</b> Prohibit surface use and surface-disturbing and disruptive activities within 0.25-mile of active dens from February 1 to May 1.</p> <p><b>PURPOSE:</b> To prevent disruption during the kit fox denning period.</p> <p><b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b></p>				•
<i>TL-CO-17</i> <i>(BLM 1991a)</i> <i>White Pelican</i> <i>No Data</i>	<p><b>STIPULATION:</b> Prohibit use within white pelican nesting and feeding habitat areas from March 16 to September 30.</p> <p><b>Purpose:</b> To protect BLM sensitive species, white pelican, from activities that would alter breeding behavior, increase the incidence of nest abandonment, and decrease breeding success.</p> <p><b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b></p>	•			
<i>TL-UB-6</i> <i>(BLM 1989a)</i> <i>Waterfowl Habitat</i> BLM Surface: 620 acres	<p><b>STIPULATION:</b> Prohibit development in waterfowl habitats from March 15 to June 30.</p> <p><b>PURPOSE:</b> To protect waterfowl from activities that would alter breeding behavior, increase the incidence of nest abandonment, and decrease breeding success.</p> <p><b>EXCEPTION:</b> This stipulation may be waived, excepted, or modified by the BLM Authorized Officer if the lessee can demonstrate that operations can be conducted without causing unacceptable impacts on breeding and nesting waterfowl. Variances could be allowed if these breeding habitats are not being utilized, or if impacts could be mitigated, or if site-specific conditions do not warrant the stipulation (e.g., few individuals affected or short duration of operations).</p> <p>Resource information for split-estate lands has not been verified by the BLM. Verification will occur during a review of APDs. On-site Inspection and consultation with the surface owner and operator may reveal that (1) the impacts addressed by the stipulation will be avoided or mitigated to an acceptable level, or (2) the resources of concern are not present. Upon either of these determinations by the BLM Authorized Officer, the stipulations can be waived, modified, or excepted without</p>	•			

**Table B-4**  
**Timing Limitation (TL) Stipulations Applicable to Fluid Mineral Leasing and Surface-disturbing Activities**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1</sup>	Stipulation Description	Alternative			
		A	B	C	D
	public notice other than that provided for the APD. If, after on-site inspection and consultation with the private surface landowner, it is determined by the BLM Authorized Officer that conditions necessary to avoid impacts on private resources addressed by these stipulations, the impacts will be assessed. If, based upon such assessment, the BLM Authorized Officer makes a decision to substantially change one or more stipulations, a 30-day public review period will be provided in addition to the public notice period for receipt of the APD. (These two 30-day notice and review periods may overlap.)  <b>Standard MODIFICATION and WAIVER apply.</b>				
	<b>Areas of Critical Environmental Concern</b>				
<b>TL-28</b> <i>East Paradox ACEC</i> BLM Surface: 7,360 acres Split-estate: 0 acres	<b>STIPULATION:</b> Close the East Paradox ACEC to rock climbing during peregrine falcon breeding season (March 1 to August 15) if peregrine falcons are present.  <b>PURPOSE:</b> To prevent disruption during the peregrine falcon breeding season.  <b>EXCEPTION:</b> During years when a nest site is unoccupied on or after May 15, the timing limitation may be suspended. It may also be suspended once the young have fledged and dispersed from the nest. An exception could be issued in cases where topographic configuration ensures an effective visual/noise barrier between disruptive activities and the occupied nest site.  <b>MODIFICATION:</b> Standard modifications apply, plus a modification may be provided for the latter end of the seasonal restriction if it is determined that young birds have fledged and dispersed from the nest site.  <b>WAIVER:</b> Standard waivers apply.		•		

<sup>1</sup>The sum of acres with TL stipulations in this table may add up to more than the total acres with TL stipulations presented in Chapter 2, as some areas may overlap.

**Table B-5**  
**Lease Notices (LN) Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected	Stipulation Description	Alternative			
		A	B	C	D
	<b>Air Quality</b>				
LN-CO-56 <i>Air</i>	Due to potential air quality concerns, supplementary air quality analysis may be required for any proposed development of this lease. This may include preparing a comprehensive emissions inventory, performing air quality modeling, and initiating interagency consultation with affected land managers and air quality regulators to determine potential mitigation options for any predicted significant impacts from the proposed development. Potential mitigation may include limiting the time, place, and pace of any proposed development, as well as providing for the best air quality control technology and/or management practices necessary to achieve area-wide air resource protection objectives. Mitigation measures would be analyzed through the appropriate level of NEPA analysis to determine effectiveness, and will be required or implemented as a permit condition of approval. At a minimum, all projects and permitted uses implemented under this lease will comply with all applicable National Ambient Air Quality Standards and ensure Air Quality Related Values are protected in nearby Class I or Sensitive Class II areas that are afforded additional air quality protection under the Clean Air Act.	•	•	•	•
	<b>Soils and Water</b>				
LN-UFO-1 <i>Municipal Water Supply</i>	If drilling is proposed, the operator is hereby notified that there are concerns about the municipal water source and water conveyance for the town of Norwood, Colorado. The lessee is hereby notified that special design, construction, and scheduling measures may be required in order to minimize the impacts of drilling and production. The overall goal of these measures is to protect Norwood's municipal water source.	•			
	<b>Special Status Species</b>				
LN-CO-34 (BLM 1991a) <i>ESA Section 7 Consultation</i>	The lease area may now or hereafter contain plants, animals, or their habitats determined to be threatened or endangered, or other special status species. The BLM may recommend modifications to exploration and development proposals to further its conservation and management objective to avoid a BLM-approved activity that would contribute to a need to list such a species or its habitat. The BLM may require modifications to or may disapprove proposed activity that is likely to jeopardize to the continued existence of a proposed or listed threatened or endangered species or result in the	•			



**Table B-5**  
**Lease Notices (LN) Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected	Stipulation Description	Alternative			
		A	B	C	D
	destruction or adverse modification of a designated or proposed critical habitat. The BLM will not approve any ground-disturbing activity that may affect any such species or critical habitat until it completes its obligations under applicable requirements of the ESA as amended, 16 USC 1531 et seq., including completion of any required procedure for conference or consultation.				
	<b>Special Status Plants</b>				
<i>LN-UFO-2</i> <i>Special Status Plants</i>	The lease area is known to contain populations of endangered plants and may hereafter contain other species protected under the ESA or other special status species. To avoid impacts on endangered, threatened, proposed species, designated critical habitat, or BLM special status species, lessees must contact the BLM UFO before any surface activities associated with this lease. The lessee may also be required to conduct additional inventories to ensure that there are no protected species on the proposed disturbance sites. The BLM may recommend modifications to exploration and development proposals to avoid impact on any species listed under the ESA, or proposed for listing under the ESA, or designated or proposed critical habitat. The BLM will not approve any ground-disturbing activity that may affect any such species or critical habitat until it completes its obligations under applicable requirements of the ESA, as amended, 16 USC 1531 et seq. This could include completing any required conference or consultation with USFWS. Additionally, project modifications may be required to avoid impacts on BLM sensitive species.	•			
	<b>Special Status Terrestrial Wildlife</b>				
<i>LN-CO-30</i> <i>(BLM 1991a)</i> <i>Grouse</i>	In order to protect nesting grouse species, surface-disturbing activities proposed from March 1 to June 30 will be relocated, consistent with lease rights granted and Section 6 of standard lease terms, out of grouse nesting habitat.  Sage-grouse nesting habitat is described as sage stands with sagebrush plants between 30 and 100 centimeters in height and a mean canopy cover between 15 and 40 percent.	•			
	<b>Paleontological Resources</b>				
<i>LN-CO-29</i> <i>(BLM 1991a)</i> <i>Paleontological Areas</i>	Before authorizing surface-disturbing activities in Class I and II Paleontological Areas [now known as PFYC Class 4 and 5], an inventory will be performed by an accredited paleontologist approved by the BLM Authorized Officer.	•			

**Table B-5**  
**Lease Notices (LN) Applicable to Fluid Mineral Leasing**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected	Stipulation Description	Alternative			
		A	B	C	D
	Coal				
LN-UB-10/LN-CO-30 <i>Coal Areas</i>	Within the Paonia-Somerset Known Recoverable Coal Resource Area, coal and oil and gas leasing and development will be managed consistent with land use plans and lease terms. More specifically, the portions of the Known Recoverable Coal Resource Area where the overburden above the B-Seam of the Mesaverde coals is less than 3,500 feet will be managed primarily for the exploration and development of the coal resources. Oil and gas operators anticipating exploration or development operations are encouraged to consult and coordinate their activities with the affected coal operators. In the event that the oil and gas and coal operators are unable to agree on proposed oil and gas exploration or development, the BLM Authorized Officer would intervene and use all pertinent lease terms, regulations, and policy to determine what course of action is in the public's interest. However, under no circumstances will the BLM approve any oil and gas operations that compromise maximum economic coal recovery or the safety of underground mining operations.	•			
	Public Health and Safety				
LN-UFO-8 LN-I <i>Unexploded Ordnance</i>	The lease area is known to contain unexploded ordnance. The Colorado National Guard and Army Reserve used the lease area as a practice area for military training in the past. Periodic surface searches for ordnance may not have located and removed all of the ordnance. Prior to any new activity on the lease area, a survey for surface and subsurface unexploded ordnance is required to avoid impacts on health and safety. Lessees must contact the BLM UFO prior to any surface activities associated with this lease. The lessee will be required to coordinate with the Colorado National Guard, Army Reserve and the Colorado Department of Public Health and Environment to conduct additional surveys to ensure that there is no unexploded ordnance present on the proposed disturbance sites and appropriate actions are taken to be sure the sites are safe for use. The BLM may recommend modifications to exploration and development proposals to avoid impacts on health and safety. The lease holder agrees to indemnify the United States against any liability arising from the lease holder's and its agents' activities on the lease area.	•	•	•	•

**Table B-6**  
**No Ground Disturbance (NGD) Restrictions Applicable to Surface-disturbing Activities**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1, 2</sup>	Stipulation Description	Alternative			
		A	B	C	D
	Soils and Water				
<b>NSO-1/NGD-1</b> <i>Geology Soil: Saline/Selenium Soils</i> 107,170 acres	Refer to NSO-1/NDG-1 in Table B-2, No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing.		•		
<b>NSO-4/NGD-2</b> <i>Geology: Slope Greater than 30 Percent</i> 174,540 acres	Refer to NSO-4/NDG-2 in Table B-2, No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing.		•		
<b>NL-2/NGD-3</b> <i>Hydrology River</i> 26,990 acres	Refer to NL-2/NGD-3 in Table B-1, Areas Closed to Fluid Mineral Leasing.		•		
<b>NSO-10/NGD-4</b> <i>Perennial Streams</i> 39,640 acres	Refer to NSO-10/NGD-4 in Table B-2, No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing.		•		
<b>NGD-5</b> <i>Public Water Supplies</i> 13,760 acres	<p><b>STIPULATION:</b> Prohibit surface-disturbing activities on lands within 2,640 feet on either side of a classified, surface water supply, stream segment (as measured from the average high water mark) for a distance of 5 miles upstream of a public water supply intake classified by the State as “water supply” and within 2,640 feet (0.5-mile) of all public water supplies that use a groundwater well or spring.</p> <p>If public water providers develop source water protection plans, apply this restriction to cover the appropriate designated area in the protection plan.</p> <p><b>PURPOSE:</b> Protecting public water supplies, water quality, aquatic habitat and human health.</p> <p><b>EXCEPTION and WAIVER:</b> Standard exception and waiver apply.</p> <p><b>MODIFICATION:</b> In addition to the standard modification, the buffer may be extended beyond 2,640 feet to include the watershed area above the point of intake if site-specific conditions warrant.</p>		•		



**Table B-6**  
**No Ground Disturbance (NGD) Restrictions Applicable to Surface-disturbing Activities**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1, 2</sup>	Stipulation Description	Alternative			
		A	B	C	D
	Vegetation				
<b>NSO-17/NGD-6</b> <i>Plant Community</i> 12,710 acres	Refer to NSO-17/NGD-6 in Table B-2, No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing.		•		
<b>NSO-18/NGD-7</b> <i>Hydrology Features</i> 63,540 acres	Refer to NSO-18/NGD-7 in Table B-2, No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing.		•		
	Special Status Plants				
<b>NSO-22/NGD-8</b> <i>Plant ESA-Listed Species</i> 5,470 acres	Refer to NSO-22/NGD-8 in Table B-2, No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing.		•		
	Special Status Fish and Aquatic Wildlife				
<b>NSO-23/NGD-9</b> <i>Wildlife ESA-Listed Species (Occupied Federally Listed Fish Habitat)</i> 51,460 acres	Refer to NSO-23/NGD-9 in Table B-2, No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing.		•		
	Special Status Terrestrial Wildlife				
<b>NSO-28/NGD-10</b> <i>Wildlife ESA-Listed Species (Wildlife and Bird Species' Occupied Habitat)</i> <i>No Data</i>	Refer to NSO-28/NGD-10 in Table B-2, No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing.		•		
<b>NSO-30/NGD-11</b> <i>Wildlife ESA-Listed Species (Yellow-billed Cuckoo Habitat)</i> 6,080 acres	Refer to NSO-30/NGD-11 in Table B-2, No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing.		•		
<b>NGD-12</b> <i>Gunnison Sage-grouse Breeding (Lek) Habitat</i> 1,330 acres	Prohibit surface-disturbing activities in all Gunnison sage-grouse lek habitat (lek area plus a 0.6-mile radius), as defined by BLM and CPW.  <b>PURPOSE:</b> To protect Gunnison sage-grouse core areas and crucial habitats.		•		

**Table B-6**  
**No Ground Disturbance (NGD) Restrictions Applicable to Surface-disturbing Activities**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1, 2</sup>	Stipulation Description	Alternative			
		A	B	C	D
<b>NSO-32/NGD-13</b> <i>Gunnison Sage-grouse Breeding (Non-lek) Habitat</i> 42,850 acres	Refer to NSO-32/NGD-13 in Table B-2, No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing.		•		
<b>NSO-34/NGD-14</b> <i>Raptor Nest Sites</i> 4,260 acres	Refer to NSO-34/NGD-14 in Table B-2, No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing.		•		
<b>NSO-37/NGD-15</b> <i>Bald Eagle Winter Roost Sites</i> 9,200 acres	Refer to NSO-37/NGD-15 in Table B-2, No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing.		•		
<b>NSO-39/NGD-16</b> <i>Mexican Spotted Owl</i> <i>No Data</i>	Refer to NSO-39/NGD-16 in Table B-2, No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing.		•		
<b>NSO-41/NGD-17</b> <i>Wildlife BLM Sensitive Species (Gunnison and White-tailed Prairie Dogs)</i> 6,480 acres	Refer to NSO-41/NGD-17 in Table B-2, No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing.		•		
<b>NSO-42/NGD-18</b> <i>Wildlife BLM Sensitive Species (Gunnison and White-tailed Prairie Dogs)</i> 90 acres	Refer to NSO-42/NGD-18 in Table B-2, No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing.			•	
<b>NSO-43/NGD-19</b> <i>Wildlife Bat: Bat Roost Sites and Winter Hibernacula</i> 2,900 acres	Refer to NSO-43/NGD-19 in Table B-2, No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing.		•		
<b>NL-2/NGD-3</b> <i>Hydrology River</i> 26,990 acres	Refer to NL-2/NGD-3 in Table B-1, Areas Closed to Fluid Mineral Leasing (NL).		•		

**Table B-6**  
**No Ground Disturbance (NGD) Restrictions Applicable to Surface-disturbing Activities**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1, 2</sup>	Stipulation Description	Alternative			
		A	B	C	D
	Cultural Resources				
<b>NSO-45/NGD-20</b> <i>Allocation to Traditional Use</i> <i>No Data</i>	Refer to NSO-45/NGD-20 in Table B-2, No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing.		•		
<b>NSO-47/NGD-21</b> <i>Tabeguache Caves/Tabeguache Pueblos Area and Tabeguache Canyon</i> 21,110 acres	Refer to NSO-47/NGD-21 in Table B-2, No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing.		•		
<b>NSO-48/NGD-22</b> <i>Cultural</i> 980 acres	Refer to NSO-48/NGD-22 in Table B-2, No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing.		•		
	Visual Resources				
<b>NSO-51/NGD-23</b> <i>Visual Class I</i> 53,870 acres	Refer to NSO-51/NGD-23 in Table B-2, No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing.		•		
	Lands with Wilderness Characteristics				
<b>NL-12/NGD-24</b> <i>Lands with Wilderness Characteristics</i> 24,910 acres	Refer to NL-12/NGD-24 in Table B-1, Areas Closed to Fluid Mineral Leasing.		•		
	Recreation				
<b>NGD-25</b> <i>SRMAs</i> 1,760 acres	<b>STIPULATION:</b> Prohibit surface-disturbing activities within RMZ 4 of Paradox Valley SRMA.  <b>PURPOSE:</b> To protect: (1) the prescribed physical, social, and operational natural resource recreational setting character; (2) the targeted recreation activity, experience, and beneficial outcome opportunities; and (3) visitor health and safety in areas of high recreational value and/or significant recreational activity.		•		
	Areas of Critical Environmental Concern				
<b>NL-16/NSO-58/NGD-26</b> <i>Special Designation ACEC</i> 180,260 acres	Refer to NL-16/NGD-26 in Table B-1, Areas Closed to Fluid Mineral Leasing, and NSO-48/NGD-26 in Table B-2, No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing.		•		



**Table B-6**  
**No Ground Disturbance (NGD) Restrictions Applicable to Surface-disturbing Activities**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1, 2</sup>	Stipulation Description	Alternative			
		A	B	C	D
	Wilderness and WSAs				
<b>NL-18/NGD-27</b> WSAs 36,160 acres	Refer to NL-18/NGD-27 in Table B-1, Areas Closed to Fluid Mineral Leasing.	•	•	•	•
<b>NL-19/NGD-28</b> <i>Sewemup Mesa WSA if Released from Wilderness Consideration</i> 1,780 acres	Refer to NL-19/NGD-28 in Table B-1, Areas Closed to Fluid Mineral Leasing.		•		
	Wild and Scenic Rivers				
<b>NSO-59/NGD-29</b> <i>Special Designation WSR ("Wild")</i> 17,210 acres	Refer to NSO-59/NGD-29 in Table B-2, No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing.		•		
	Public Health and Safety				
<b>NSO-66/NGD-30</b> <i>DOE Uranium Mill Tailings Remedial Action Area</i> 20 acres	Refer to NSO-66/NGD-30 in Table B-2, No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing.		•	•	•

<sup>1</sup>The sum of acres with NGD restrictions in this table may add up to more than the total acres with NGD restrictions presented in Chapter 2 as some areas may overlap.

<sup>2</sup>Acres are for BLM surface only; NGD restrictions do not apply to non-BLM land.

**Table B-7**  
**Site-specific Relocation (SSR) Restrictions Applicable to Surface-disturbing Activities**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1, 2</sup>	Stipulation Description	Alternative			
		A	B	C	D
	Land Health				
<b>CSU-1/SSR-1</b> <i>Lands, Streams and Wetlands "Not Meeting" or "Meeting with Problems" BLM Colorado Public Land Health Standards</i> 393,000 acres	Refer to CSU-1/SSR-1 in Table B-3, Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing.		•		
	Soils and Water				
<b>CSU-2/SSR-2</b> <i>Geology Soil: Saline/Selenium Soils</i> 107,170 acres	Refer to CSU-2/SSR-2 in Table B-3, Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing.			•	
<b>CSU-3/SSR-3</b> <i>Geology Soil: Saline/Selenium Soils</i> 107,170 acres	Refer to CSU-3/SSR-3 in Table B-3, Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing.				•
<b>CSU-4/SSR-4</b> <i>Geology Soil: Potential Biological Soil Crust</i> 254,840 acres	Refer to CSU-4/SSR-4 in Table B-3, Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing.		•		
<b>CSU-5/SSR-5</b> <i>Geology Soil: East Paradox Biological Soil Crust</i> 1,650 acres	Refer to CSU-5/SSR-5 in Table B-3, Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing.			•	
<b>CSU-6/SSR-6</b> <i>Geology Soil: Potential Biological Soil Crust</i> <i>No Data</i>	Refer to CSU-6/SSR-6 in Table B-3, Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing.				•
<b>CSU-8/SSR-7</b> <i>Geology: Slope Greater than 40 Percent</i> 115,080 acres	Refer to CSU-8/SSR-7 in Table B-3, Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing.			•	
<b>NSO-6/SSR-8</b> <i>Geology: Slope Greater than 40 Percent</i> 115,080 acres	Refer to NSO-6/SSR-8 in Table B-2, No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing.				•

**Table B-7**  
**Site-specific Relocation (SSR) Restrictions Applicable to Surface-disturbing Activities**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1, 2</sup>	Stipulation Description	Alternative			
		A	B	C	D
<b>CSU-9/SSR-9</b> <i>Geology: Slope from 30 to 39 Percent</i> 60,200 acres	Refer to CSU-9/SSR-9 in Table B-3, Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing.				•
<b>CSU-10/SSR-10</b> <i>Hydrology River</i> 26,990 acres	Refer to CSU-10/SSR-10 in Table B-3, Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing.			•	
<b>NSO-9/SSR-11</b> <i>Hydrology River</i> 26,990 acres	Refer to NSO-9/SSR-11 in Table B-2, No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing.				•
<b>CSU-11/SSR-12</b> <i>Perennial Streams</i> 26,050 acres	Refer to CSU-11/SSR-12 in Table B-3, Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing.			•	
<b>NSO-11/SSR-13</b> <i>Hydrology Features</i> 26,050 acres	Refer to NSO-11/SSR-13 in Table B-2, No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing.				•
	Vegetation				
<b>CSU-14/SSR-14</b> <i>Plant Community</i> 12,710 acres	Refer to CSU-14/SSR-14 in Table B-3, Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing.				•
<b>CSU-15/SSR-15</b> <i>Naturally Occurring Riparian and Wetland Areas, Springs, and Seeps</i> 10,280 acres	Refer to CSU-15/SSR-15 in Table B-3, Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing.			•	
<b>NSO-19/SSR-16</b> <i>Hydrology Features</i> 32,330 acres	Refer to NSO-19/SSR-16 in Table B-2, No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing.				•
	Terrestrial Wildlife				
<b>NSO-20/SSR-17</b> <i>Ecological Emphasis Areas</i> 207,310 acres	Refer to NSO-20/SSR-17 in Table B-3, Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing.		•		



**Table B-7**  
**Site-specific Relocation (SSR) Restrictions Applicable to Surface-disturbing Activities**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1, 2</sup>	Stipulation Description	Alternative			
		A	B	C	D
<b>CSU-17/SSR-18</b> <i>Ecological Emphasis Areas</i> Alternative B: 35,250 acres Alternative C: 24,150 acres Alternative D: 177,680 acres	Refer to CSU-17/SSR-18 in Table B-3, Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing.		•	•	•
<b>CSU-18/SSR-19</b> <i>Desert and Rocky Mountain Bighorn Sheep Summer Range</i> 39,530 acres	Refer to CSU-18/SSR-19 in Table B-3, Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing.		•		•
	Special Status Plants				
<b>CSU-19/SSR-20</b> <i>BLM Sensitive Plant Species</i> 3,240 acres	Refer to CSU-19/SSR-20 in Table B-3, Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing.				•
<b>CSU-20/SSR-21</b> <i>Plant ESA-Listed Species</i> 6,330 acres	Refer to CSU-20/SSR-21 in Table B-3, Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing.				•
	Special Status Fish and Aquatic Wildlife				
<b>NSO-24/SSR-22</b> <i>Wildlife ESA-Listed Species (Occupied Federally Listed Fish Habitat)</i> 270 acres	Refer to NSO-24/SSR-22 in Table B-2, No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing.				•
<b>CSU-21/SSR-23</b> <i>Occupied Native Cutthroat Trout Habitat</i> 52,580 acres	Refer to CSU-21/SSR-23 in Table B-3, Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing.		•		
<b>CSU-22/SSR-24</b> <i>Occupied Native Cutthroat Trout Habitat</i> 20,270 acres	Refer to CSU-22/SSR-24 in Table B-3, Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing.			•	

**Table B-7**  
**Site-specific Relocation (SSR) Restrictions Applicable to Surface-disturbing Activities**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1, 2</sup>	Stipulation Description	Alternative			
		A	B	C	D
<b>NSO-26/SSR-25</b> <i>Occupied Native Cutthroat Trout Habitat</i> 12,250 acres	Refer to NSO-26/SSR-25 in Table B-3, Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing.				•
<b>CSU-23/SSR-26</b> <i>Occupied Native Cutthroat Trout Habitat</i> 8,010 acres	Refer to CSU-23/SSR-26 in Table B-3, Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing.				•
	Special Status Terrestrial Wildlife				
<b>CSU-24/SSR-27</b> <i>Wildlife ESA-Listed Species (Federally Threatened, Endangered, and Candidate Wildlife and Bird Species' Occupied Habitat)</i> No Data	Refer to CSU-24/SSR-27 in Table B-3, Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing.			•	
<b>NSO-29/SSR-28</b> <i>Wildlife ESA-Listed Species (Wildlife and Bird Species' Occupied Habitat)</i> No Data	Refer to NSO-29/SSR-28 in Table B-2, No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing.				•
<b>CSU-25/SSR-29</b> <i>Wildlife ESA-Listed Species (Yellow-billed Cuckoo Habitat)</i> 6,080 acres	Refer to CSU-25/SSR-29 in Table B-3, Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing.				•
<b>CSU-26/SSR-30</b> <i>Wildlife ESA-Listed Species (Canada Lynx Habitat)</i> 3,860 acres	Refer to CSU-26/SSR-30 in Table B-3, Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing.		•		
<b>CSU-27/SSR-31</b> <i>Wildlife ESA-Listed Species (Canada Lynx Habitat)</i> 3,860 acres	Refer to CSU-27/SSR-31 in Table B-3, Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing.				•

**Table B-7**  
**Site-specific Relocation (SSR) Restrictions Applicable to Surface-disturbing Activities**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1, 2</sup>	Stipulation Description	Alternative			
		A	B	C	D
<b>NSO-31/SSR-32</b> <i>Gunnison Sage-grouse Breeding (Lek) Habitat</i> 1,330	Refer to NSO-31/SSR-32 in Table B-2, No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing.			•	•
<b>CSU-28/SSR-33</b> <i>Gunnison Sage-grouse Breeding (Non-lek) Habitat</i> 14,700 acres	Refer to CSU-28/SSR-33 in Table B-3, Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing.			•	
<b>CSU-29/SSR-34</b> <i>Gunnison Sage-grouse Breeding (Non-lek) Habitat</i> 14,700 acres	Refer to CSU-29/SSR-34 in Table B-3, Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing.				•
<b>CSU-30/SSR-35</b> <i>Raptor Breeding Habitat</i> 40,910 acres	Refer to CSU-30/SSR-35 in Table B-3, Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing.		•		
<b>NSO-36/SSR-36</b> <i>Raptor Nest Sites (Except Mexican Spotted Owl)</i> 8,440 acres	Refer to NSO-36/SSR-36 in Table B-2, No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing.				•
<b>CSU-32/SSR-37</b> <i>Raptor Breeding Habitat (Accipiters, Falcons [Except Kestrel], Buteos, and Owls [Except Mexican Spotted Owl])</i> 21,790 acres	Refer to CSU-32/SSR-37 in Table B-3, Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing.				•
<b>NSO-38/SSR-38</b> <i>Bald Eagle Winter Roost Sites</i> 4,570 acres	Refer to NSO-38/SSR-38 in Table B-2, No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing.				•
<b>CSU-33/SSR-39</b> <i>Bald Eagle Habitat (Winter Concentration and Communal Roosts)</i> 10,180 acres	Refer to CSU-33/SSR-39 in Table B-3, Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing.		•		•



**Table B-7**  
**Site-specific Relocation (SSR) Restrictions Applicable to Surface-disturbing Activities**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1, 2</sup>	Stipulation Description	Alternative			
		A	B	C	D
<b>CSU-34/SSR-40</b> <i>Mexican Spotted Owl</i> <i>Suitable Breeding</i> <i>Habitat</i> <i>No Data</i>	Refer to CSU-34/SSR-40 in Table B-3, Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing.				•
<b>NSO-40/SSR-41</b> <i>Mexican Spotted Owl</i> <i>No Data</i>	Refer to NSO-40/SSR-41 in Table B-2, No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing.				•
<b>CSU-35/SSR-42</b> <i>Wildlife BLM Sensitive</i> <i>Species (Gunnison and</i> <i>White-tailed Prairie</i> <i>Dogs)</i> 6,480 acres	Refer to CSU-35/SSR-42 in Table B-3, Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing.				•
<b>CSU-36/SSR-43</b> <i>Wildlife BLM Sensitive</i> <i>Species (Active Kit Fox</i> <i>Dens)</i> <i>No Data</i>	Refer to CSU-36/SSR-43 in Table B-3, Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing.		•		
<b>CSU-37/SSR-44</b> <i>Wildlife BLM Sensitive</i> <i>Species (Active Kit Fox</i> <i>Dens)</i> <i>No Data</i>	Refer to CSU-37/SSR-44 in Table B-3, Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing.				•
<b>CSU-38/SSR-45</b> <i>Wildlife Bat: Bat Roost</i> <i>Sites and Winter</i> <i>Hibernacula</i> 2,900 acres	Refer to CSU-38/SSR-45 in Table B-3, Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing.			•	
<b>NSO-44/SSR-46</b> <i>Wildlife Bat: Bat Roost</i> <i>Sites and Winter</i> <i>Hibernacula (Federally</i> <i>Listed and BLM Sensitive</i> <i>Species)</i> 2,900 acres	Refer to NSO-44/SSR-46 in Table B-2, No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing.				•

**Table B-7**  
**Site-specific Relocation (SSR) Restrictions Applicable to Surface-disturbing Activities**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1, 2</sup>	Stipulation Description	Alternative			
		A	B	C	D
<b>CSU-39/SSR-47</b> <i>Wildlife Bat: Bat Roost Sites and Winter Hibernacula (Colorado State Species of Concern)</i> 2,900 acres	Refer to CSU-39/SSR-47 in Table B-3, Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing.				•
<b>CSU-10/SSR-10</b> <i>Hydrology River</i> 26,990 acres	Refer to CSU-10/SSR-10 in Table B-3, Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing.			•	
<b>NSO-9/SSR-11</b> <i>Hydrology River</i> 26,990 acres	Refer to NSO-9/SSR-11 in Table B-2, No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing.				•
	Cultural Resources				
<b>CSU-40/SSR-48</b> <i>Allocation to Traditional Use</i> No Data	Refer to CSU-40/SSR-48 in Table B-3, Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing.			•	
<b>NSO-46/SSR-49</b> <i>Allocation to Traditional Use</i> No Data	Refer to NSO-46/SSR-49 in Table B-2, No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing.				•
<b>CSU-41/SSR-50</b> <i>Tabeguache Pueblos Area and Tabeguache Canyon</i> 21,110 acres	Refer to CSU-41/SSR-50 in Table B-3, Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing.				•
<b>CSU-42/SSR-51</b> <i>Sites Listed on the National or State Register of Historic Places</i> No Data	Refer to CSU-42/SSR-51 in Table B-3, Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing.			•	
<b>NSO-49/SSR-52</b> <i>Cultural</i> 8,150 acres	Refer to NSO-49/SSR-52 in Table B-2, No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing.				•
<b>CSU-43/SSR-53</b> <i>Cultural</i> No Data	Refer to CSU-43/SSR-53 in Table B-3, Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing.		•		•

**Table B-7**  
**Site-specific Relocation (SSR) Restrictions Applicable to Surface-disturbing Activities**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1, 2</sup>	Stipulation Description	Alternative			
		A	B	C	D
<b>CSU-44/SSR-54</b> <i>Area of Archaeological Significance</i> 31,870 acres	Refer to CSU-44/SSR-54 in Table B-3, Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing.				•
	Visual Resources				
<b>CSU-46/SSR-55</b> <i>Visual: VRM Class II and III</i> 598,500 acres	Refer to CSU-46/SSR-55 in Table B-3, Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing.		•		
	Lands with Wilderness Characteristics				
<b>NSO-53/SSR-56</b> <i>Lands with Wilderness Characteristics</i> 18,320 acres	Refer to NSO-53/SSR-56 in Table B-2, No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing.				•
	Areas of Critical Environmental Concern				
<b>NL-16/NSO-58/ CSU-52/SSR-57</b> <i>Special Designation ACEC</i> Alternative B: 35,560 acres Alternative C: 6,580 acres Alternative D: 28,540 acres	Refer to NL-16/SSR-57 in Table B-1, Areas Closed to Fluid Mineral Leasing (NL), NSO-58/SSR-57 in Table B-2, No Surface Occupancy (NSO) Stipulations Applicable to Fluid Mineral Leasing, and CSU-52/SSR-57 in Table B-3, Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing.		•	•	•
	Wilderness and WSAs				
<b>SSR-58</b> <i>Tabeguache Area</i> 8,080 acres	<p><b>STIPULATION:</b> Apply SSR restrictions in the Tabeguache Area.</p> <p><b>PURPOSE:</b> The purpose of this stipulation is to ensure that management of the Congressionally designated Tabeguache Area is in compliance with its enabling legislation, the Colorado Wilderness Act of 1993. The act states that “activities within such areas shall be managed by the Secretary of Agriculture and the Secretary of the Interior, as appropriate, so as to maintain the areas’ presently existing wilderness character and potential for inclusion in the National Wilderness Preservation System.”</p> <p><b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b></p>		•	•	•



**Table B-7**  
**Site-specific Relocation (SSR) Restrictions Applicable to Surface-disturbing Activities**

Stipulation Number (Existing/New) Protected Resource Acres/Miles Affected <sup>1, 2</sup>	Stipulation Description	Alternative			
		A	B	C	D
<b>NL-19/SSR-59</b> <i>Sewemup Mesa WSA if Released from Wilderness Consideration</i> 1,780 acres	Refer to NL-19/SSR-59 in Table B-1, Areas Closed to Fluid Mineral Leasing (NL).				•
	Wild and Scenic Rivers				
<b>CSU-53/SSR-60</b> <i>Special Designation WSR (Scenic and Recreational Segments)</i> 32,050 acres	Refer to CSU-53/SSR-60 in Table B-3, Controlled Surface Use (CSU) Stipulations Applicable to Fluid Mineral Leasing.		•		
<b>SSR-61</b> <i>Special Designation WSR</i> 31,440 acres	<p><b>STIPULATION:</b> Apply SSR restrictions within the WSR study corridor, as defined in the Uncompahgre Wild and Scenic River Suitability Report (<b>Appendix P</b>), of segments determined to be suitable for inclusion in the National Wild and Scenic Rivers System.</p> <p><b>PURPOSE:</b> The Wild and Scenic River Act requires that management and development of the suitable river and its corridor should not be modified, subject to valid existing rights, to the degree that its suitability or tentative classification would be affected (i.e., its tentative river area classification cannot be changed from wild to scenic, or from scenic to recreational). The SSR restriction would allow some modification where needed.</p> <p><b>Standard EXCEPTION, MODIFICATION, and WAIVER apply.</b></p>				•

<sup>1</sup>The sum of acres with SSR restrictions in this table may add up to more than the total acres with SSR restrictions presented in Chapter 2, as some areas may overlap.

<sup>2</sup>Acres are for BLM-administered surface only; SSR restrictions do not apply to non-BLM-administered land.

**Table B-8**  
**Raptor Species Breeding Periods**

		<b>Breeding Period</b>
<b>Falconiformes</b>		
Osprey	<i>Pandion haliaetus</i>	4/1-8/31
Bald eagle	<i>Haliaeetus leucocephalus</i>	11/1-7/31
Northern harrier	<i>Circus cyaneus</i>	4/1-8/15
Sharp-shinned hawk	<i>Accipiter striatus</i>	3/15-8/31
Cooper's hawk	<i>Accipiter cooperii</i>	3/15-8/31
Northern goshawk	<i>Accipiter gentilis</i>	3/1-7/31
Swainson's hawk	<i>Buteo swainsoni</i>	4/1-7/15
Red-tailed hawk	<i>Buteo jamaicensis</i>	2/15-7/15
Ferruginous hawk	<i>Buteo regalis</i>	2/1-7/15
Rough-legged hawk	<i>Buteo lagopus</i>	N/A <sup>1</sup>
Golden eagle	<i>Aquila chrysaetos</i>	12/15-7/15
American kestrel	<i>Falco sparverius</i>	4/1-8/15
Merlin	<i>Falco columbarius</i>	4/1-8/31
Peregrine falcon	<i>Falco peregrinus</i>	2/1-8/31
Prairie falcon	<i>Falco mexicanus</i>	year round
<b>Strigiformes</b>		
Common barn owl	<i>Tyto alba</i>	2/1-9/15
Flammulated owl	<i>Otus flammeolus</i>	4/1-9/30
Western screech owl	<i>Megascops kennicottii</i>	3/1-8/15
Eastern screech owl	<i>Megascops asio</i>	3/1-8/15
Great horned owl	<i>Bubo virginianus</i>	12/1-9/31
Northern pygmy owl	<i>Glaucidium gnoma</i>	4/1-8/1
Burrowing owl	<i>Athene cunicularia</i>	4/1-8/15
Mexican spotted owl	<i>Strix occidentalis lucida</i>	3/1-8/31
Great gray owl	<i>Strix nebulosa</i>	3/1-8/31
Long-eared owl	<i>Asio otus</i>	2/1-8/15
Short-eared owl	<i>Asio flammeus</i>	3/1-8/1
Boreal owl	<i>Aegolius funereus</i>	2/1-7/31
Northern saw-whet owl	<i>Aegolius acadicus</i>	3/1-8/31

<sup>1</sup>Species does not breed in Colorado

Source: Developed from Klute 2008 and Table of Seasonal (Breeding) Buffers.xls (BLM Colorado State Office)

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# Appendix C

BLM Standards for Public Land Health and  
Guidelines for Livestock Grazing Management in  
Colorado



# APPENDIX C

## BLM STANDARDS FOR PUBLIC LAND HEALTH AND GUIDELINES FOR LIVESTOCK GRAZING MANAGEMENT IN COLORADO

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### STANDARDS FOR PUBLIC LAND HEALTH

Standards describe conditions needed to sustain public land health, and relate to all uses of the public lands. Standards are applied on a landscape scale and relate to the potential of the landscape.

#### **Standard I**

Upland soils exhibit infiltration and permeability rates that are appropriate to soil type, climate, land form, and geologic processes. Adequate soil infiltration and permeability allows for the accumulation of soil moisture necessary for optimal plant growth and vigor, and minimizes surface runoff.

#### **Indicators:**

- Expression of rills, soil pedestals is minimal.
- Evidence of actively-eroding gullies (incised channels) is minimal.
- Canopy and ground cover are appropriate.
- There is litter accumulating in place and is not sorted by normal overland water flow.
- There is appropriate organic matter in soil.
- There is diversity of plant species with a variety of root depths.
- Upland swales have vegetation cover or density greater than that of adjacent uplands.
- There are vigorous, desirable plants.

## **Standard 2**

Riparian systems associated with both running and standing water function properly and have the ability to recover from major disturbance such as fire, severe grazing, or 100-year floods. Riparian vegetation captures sediment, and provides forage, habitat and bio-diversity. Water quality is improved or maintained. Stable soils store and release water slowly.

### **Indicators:**

- Vegetation is dominated by an appropriate mix of native or desirable introduced species.
- Vigorous, desirable plants are present.
- There is vegetation with diverse age class structure, appropriate vertical structure, and adequate composition, cover, and density.
- Streambank vegetation is present and is comprised of species and communities that have root systems capable of withstanding high streamflow events.
- Plant species present indicate maintenance of riparian moisture characteristics.
- Stream is in balance with the water and sediment being supplied by the watershed (e.g., no headcutting, no excessive erosion or deposition).
- Vegetation and free water indicate high water tables.
- Vegetation colonizes point bars with a range of age classes and successional stages.
- An active floodplain is present.
- Residual floodplain vegetation is available to capture and retain sediment and dissipate flood energies.
- Stream channels with size and meander pattern appropriate for the stream's position in the landscape, and parent materials.
- Woody debris contributes to the character of the stream channel morphology.

## **Standard 3**

Healthy, productive plant and animal communities of native and other desirable species are maintained at viable population levels commensurate with the species and habitat's potential. Plants and animals at both the community and population level are productive, resilient, diverse, vigorous, and able to reproduce and sustain natural fluctuations, and ecological processes.

### **Indicators:**

- Noxious weeds and undesirable species are minimal in the overall plant community.
- Native plant and animal communities are spatially distributed across the landscape with a density, composition, and frequency of species suitable to ensure reproductive capability and sustainability.
- Plants and animals are present in mixed age classes sufficient to sustain recruitment and mortality fluctuations.



- Landscapes exhibit connectivity of habitat or presence of corridors to prevent habitat fragmentation.
- Photosynthetic activity is evident throughout the growing season.
- Diversity and density of plant and animal species are in balance with habitat/landscape potential and exhibit resilience to human activities.
- Appropriate plant litter accumulates and is evenly distributed across the landscape.
- Landscapes composed of several plant communities that may be in a variety of successional stages and patterns.

#### **Standard 4**

Special status, threatened and endangered species (federal and state), and other plants and animals officially designated by the BLM, and their habitats are maintained or enhanced by sustaining healthy, native plant and animal communities.

##### **Indicators:**

- All the indicators associated with the plant and animal communities standard apply.
- There are stable and increasing populations of endemic and protected species in suitable habitat.
- Suitable habitat is available for recovery of endemic and protected species.

#### **Standard 5**

The water quality of all water bodies, including ground water where applicable, located on or influenced by BLM lands will achieve or exceed the Water Quality Standards established by the State of Colorado. Water Quality Standards for surface and ground waters include the designated beneficial uses, numeric criteria, narrative criteria, and anti-degradation requirements set forth under State law as found in (5 CCR 1002-8), as required by Section 303(c) of the Clean Water Act.

##### **Indicators:**

- Appropriate populations of macroinvertebrates, vertebrates, and algae are present.
- Surface and ground waters only contain substances (e.g. sediment, scum, floating debris, odor, heavy metal precipitates on channel substrate) attributable to humans within the amounts, concentrations, or combinations as directed by the Water Quality Standards established by the State of Colorado (5 CCR 1002-8).

### **GUIDELINES FOR LIVESTOCK GRAZING MANAGEMENT**

Guidelines are the management tools, methods, strategies, and techniques (e.g., BMPs) designed to maintain or achieve healthy public lands as defined by the standards. Currently, the only guidelines for BLM Colorado that have been developed in concert with the Resource Advisory Councils are livestock grazing management guidelines.

- I. Grazing management practices promote plant health by providing for one or more of the following:

- periodic rest or deferment from grazing during critical growth periods;
  - adequate recovery and regrowth periods;
  - opportunity for seed dissemination and seedling establishment.
2. Grazing management practices address the kind, numbers, and class of livestock, season, duration, distribution, frequency and intensity of grazing use and livestock health.
  3. Grazing management practices maintain sufficient residual vegetation on both upland and riparian sites to protect the soil from wind and water erosion, to assist in maintaining appropriate soil infiltration and permeability, and to buffer temperature extremes. In riparian areas, vegetation dissipates energy, captures sediment, recharges ground water, and contributes to stream stability.
  4. Native plant species and natural revegetation are emphasized in the support of sustaining ecological functions and site integrity. Where reseeding is required, on land treatment efforts, emphasis will be placed on using native plant species. Seeding of non-native plant species will be considered based on local goals, native seed availability and cost, persistence of non-native plants and annuals and noxious weeds on the site, and composition of non-natives in the seed mix.
  5. Range improvement projects are designed consistent with overall ecological functions and processes with minimum adverse impacts to other resources or uses of riparian/wetland and upland sites.
  6. Grazing management will occur in a manner that does not encourage the establishment or spread of noxious weeds. In addition to mechanical, chemical, and biological methods of weed control, livestock may be used where feasible as a tool to inhibit or stop the spread of noxious weeds.
  7. Natural occurrences such as fire, drought, flooding, and prescribed land treatments should be combined with livestock management practices to move toward the sustainability of biological diversity across the landscape, including the maintenance, restoration, or enhancement of habitat to promote and assist the recovery and conservation of threatened, endangered, or other special status species, by helping to provide natural vegetation patterns, a mosaic of successional stages, and vegetation corridors, and thus minimizing habitat fragmentation.
  8. Colorado Best Management Practices and other scientifically developed practices that enhance land and water quality should be used in the development of activity plans prepared for land use.

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# Appendix D

## Ecological Emphasis Areas





# APPENDIX D

## ECOLOGICAL EMPHASIS AREAS

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### INTRODUCTION

This appendix provides background information on ecological emphasis areas, including a description of the area, the habitat type protected, and the benefiting species.

### CONCEPT AND IDENTIFICATION OF ECOLOGICAL EMPHASIS AREAS

The Vegetation and Terrestrial Wildlife sections of the RMP revision include alternatives that provide extra protections for ecological emphasis areas. These are defined as otherwise unprotected core wildlife and native plant habitat and associated movement, dispersal, and migration corridors. Protections for core and corridor habitat are proposed as a mechanism to help protect biodiversity across the UFO and larger landscape over the long term.

Cores are patches of quality habitat in a fragmented landscape, and corridors are strips of mainly undisturbed land that connect the patches. These concepts were developed in the early 1980s as scientists realized that traditional approaches to species conservation, which emphasized preserving small areas with high biodiversity or rare species, were not preserving biodiversity at the landscape scale (Faaborg 1980; Samson 1980). Noss (1983) proposed that the ideal approach to conserving biodiversity would be based on maintaining both large and small patches of natural, intact ecosystems in approximate proportion to their former abundance in the region. This strategy is designed to maintain both species and ecological processes such as fire in a landscape (Kushlan 1979). Interconnections (corridors) between the patches allow for movement and dispersal of plants and animals between habitat patches. This network of patches and corridors provides for connectivity across the landscape, which is important for maintaining genetic viability of populations and species richness within habitat patches (Miller 1979). Maintaining connectivity, particularly across elevation zones, is also one strategy suggested for minimizing loss of forest biodiversity under a rapidly changing climate (Noss 2001).

The strategy of conserving connected habitat patches across a landscape and elevation zones is well suited for BLM lands. The multiple-use mandate of BLM has resulted in an increasingly fragmented landscape over time. This fragmentation is generally damaging to the habitat, watershed, and ecological values for which the BLM is also mandated to manage. Fragmentation

degrades these values through introducing weeds, increasing erosion and edge habitat, creating barriers to migration, and disrupting wildlife behavior. Resource management planning offers the opportunity to emphasize certain uses over others in different parts of the landscape. If important core areas and corridors are designated during planning, then conflicting uses could be emphasized and located in other areas, or modified to minimize impacts within core and corridor habitat.

The west-central Colorado landscape is dominated by large plateaus, mountain ranges, and the valleys in between. BLM lands make up only a portion of this landscape, are largely situated in the mid-elevation zone between valley and mountain, and occupy primarily salt desert, sagebrush, pinyon-juniper, and mountain shrub habitats. Many of the wildlife species that occur on BLM lands move into other habitat types for parts of their life cycles. Furthermore, under a scenario of rapid climate change, plants currently on BLM lands may need to move upward in elevation, potentially onto non-BLM lands. If the ultimate goal is species conservation on BLM lands, then protected areas on BLM lands need to be coordinated with conserved areas across the larger landscape. Therefore, BLM lands need to contribute patches and corridors of salt desert, sagebrush, pinyon-juniper, and mountain shrub habitats to a larger network of core and corridor habitat.

The UFO has identified a number of ecological emphasis areas with the intention of contributing to connectivity across the larger landscape. Efforts to develop networks of protected lands elsewhere have depended on existing protected areas such as Wilderness, National Parks, roadless areas, and nature preserves as primary core areas, and then looked to undeveloped lands in between for corridors (e.g., Yellowstone to Yukon and Algonquin to Adirondacks) (Yellowstone to Yukon Conservation Initiative 2015). Within and adjacent to the UFO are existing and proposed Wilderness and WSAs, ACECs, and National Conservation Areas. These were all considered during the identification of ecological emphasis areas. Additional patches of comparatively pristine habitat were added and spatially distributed to represent the different regions within the UFO. Corridors were mainly situated along major drainages that led from valley bottom up to National Forest. The resulting ecological emphasis areas supplement the other protected areas proposed for the RMP revision. These include rivers, streams, and adjoining riparian areas; pristine, unique, and ancient plant communities; WSAs; Wilderness Areas; lands with wilderness characteristics outside WSAs and Wilderness; ACECs; and protected areas of occupied habitat for threatened and endangered species. Together these form a network of largely interconnected habitat patches, both small and large, that span the UFO and links mountain areas with the valley bottoms.

## **DESCRIPTION OF ECOLOGICAL EMPHASIS AREAS**

**Table D-I**, Description of Proposed Ecological Emphasis Areas, describes each ecological emphasis area, including their habitat type and the primary benefiting species.

**Table D-1**  
**Description of Proposed Ecological Emphasis Areas**

<b>Ecological Emphasis Area Name</b>	<b>Description</b>	<b>Habitat Type</b>	<b>Primary Benefiting Species</b>
Adobe	Includes Adobe Badlands WSA; connects Dominguez-Escalante NCA, Gunnison River, and Uncompahgre Plateau with the Grand Mesa. Includes some of the richest Colorado hookless cactus habitat. Corridor identified as important by Southern Rockies Ecosystem Project. Divided into four zones.	Salt desert, pinyon-juniper	Pronghorn, bear, kit fox, prairie dog, burrowing owl, mule deer, elk, mountain lion, Colorado hookless cactus
Dry Creek	Centers on three large drainages that link the Uncompahgre Valley to the Uncompahgre Plateau and National Forest – Dry Creek, Cushman Creek, and Sandy Wash. Divided into five zones.	Riparian, cliff/canyon, pinyon-juniper, small areas of sagebrush and ponderosa	Bear, mountain lion, mule deer, native warm water fish
Jumbo Mountain-McDonald Creek	Links North Fork Valley with the National Forest and West Elk Wilderness. Adjoins several conservation easements that link the southern three parcels. Important for landscape-scale linkage. Divided into five zones.	Mountain shrub, pinyon-juniper, small areas of sagebrush	Mule deer, elk, mountain lion, bear
La Sal	Centers on Dolores Canyon WSA and provides connection between the Dolores River to the La Sal Mountains via La Sal Creek and Nyswonger Mesa. Divided into three zones.	Riverine and riparian, cliff and canyon, pinyon-juniper	Peregrine falcon, desert bighorn, bear, mule deer, elk, native warm water fish, sensitive frog species, Mexican spotted owl
Monitor-Potter-Roubideau	Based around Camel Back WSA and adjoins protected Roubideau Area on National Forest, centering on major Roubideau and tributary stream and canyon complex. Links Uncompahgre Valley with Uncompahgre Plateau. Divided into 11 zones.	Riparian, salt desert, cliff/canyon, pinyon-juniper, small areas of sagebrush and mountain shrub	Desert bighorn, native warm water fish, native cold water fish, bear, mule deer, mountain lion
Naturita Canyon	Adjoins National Forest System lands leading up to Lone Cone area; includes the major Naturita Canyon drainage, which has wildlife/indicator species emphasis on adjoining National Forest. Divided into four zones.	Riparian, cliff and canyon, pinyon-juniper	Bear, mountain lion, mule deer, elk, native warm water and cold water fish
Ridgway	BLM land on Log Hill Mesa and around Billy Creek State Wildlife Area. Contributes to linkage between Cimarron Ridge and Uncompahgre Plateau, in critical big game wintering area. Divided into four zones.	Pinyon-juniper, mountain shrub	Mountain lion, mule deer, elk, bear

**Table D-1**  
**Description of Proposed Ecological Emphasis Areas**

<b>Ecological Emphasis Area Name</b>	<b>Description</b>	<b>Habitat Type</b>	<b>Primary Benefiting Species</b>
San Miguel	Links the Mount Wilson area on National Forest across the San Miguel Canyon to the Uncompahgre Plateau, and contributes to linkage between Mount Sneffels area and Lizard Head area; includes parts of the existing San Miguel ACEC. Divided into seven zones.	Riverine and riparian, cliff and canyon, mountain shrub, pinyon-juniper, montane forest	Bear, mountain lion, lynx, mule deer, elk, native cold water fish
Sims Mesa	An important core area for wintering mule deer and elk. Contributes to connectivity between Uncompahgre Plateau and the Ridgway Ecological Emphasis Area. Contains historic, potential, and occupied Gunnison sage-grouse habitat. Also contains proposed critical habitat for Gunnison sage-grouse as designated by USFWS.	Sagebrush, pinyon-juniper, mountain shrub	Mule deer, elk, Gunnison sage-grouse, mountain lion
Spring Canyon	Includes BLM lands in Spring Canyon, a major drainage on the eastern Uncompahgre Plateau. Links Uncompahgre Valley with National Forest along Spring Creek.	Riparian, cliff/canyon, pinyon-juniper, small areas of sagebrush	Bear, mountain lion, mule deer, turkey, cutthroat trout
Tabeguache	Centers around protected Tabeguache Area on BLM and National Forest lands, and includes Tabeguache Creek and its major tributaries. Provides connection between the San Miguel River and the Uncompahgre Plateau, and over the Plateau into other protected areas. Divided into 10 zones.	Riverine and riparian, cliff and canyon, pinyon-juniper, small areas of sagebrush	Bear, mountain lion, mule deer elk, native warm water and cold water fish, sensitive frog species
Terror Creek	Terror Creek drainage from North Fork of the Gunnison River up to National Forest on the Grand Mesa.	Riverine and riparian, pinyon-juniper, mountain shrub, small areas of montane forest	Cutthroat trout, bear, mountain lion, mule deer, elk



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# Appendix E

## Livestock Grazing Allotments and Allotment Levels





## APPENDIX E

### LIVESTOCK GRAZING ALLOTMENTS AND ALLOTMENT LEVELS

Allotment Name	Allotment Number	Permitted AUMs				BLM Acres	Other Acres	BLM Acres Available				Management Category <sup>1</sup>
		A	B	C	D			A	B	C	D	
25 Mesa - North	14008	339	338	339	339	5,780	493	5,780	5,290	5,780	5,780	I
Adobe	05027	24	24	24	24	310	81	310	310	310	310	C
Alder Creek	17253	10	10	10	10	40	4,500	40	40	40	40	C
Alkali Flats	14017	1,001	575	1,001	1,001	8,890	70	8,890	5,110	8,890	8,890	C
Allen Reservoir	05050	39	39	39	39	210	486	210	210	210	210	C
Antelope	14020	24	14	24	24	830	170	830	490	830	830	C
Anthracite Creek	14525	92	92	92	92	1,000	1,816	1,000	1,000	1,000	1,000	M
Aspen Ditch	14551	57	0	57	57	400	0	400	0	400	400	C
Bald Hills	05510	22	22	22	22	270	1,296	270	270	270	270	C
Baldy	05568	88	88	88	88	620	0	620	620	620	620	C
Barkleew Draw Common	07303	562	562	562	562	5,930	1,079	5,930	5,930	5,930	5,930	I
Beaver Canyon	17060	50	0	50	0	800	0	800	0	800	0	M
Beaver Hill	05522	576	576	576	576	6,010	0	6,010	6,010	6,010	6,010	C
Beaver Rim	07204	12	0	12	12	260	150	260	0	260	260	C
Ben Lowe	14013	410	410	410	410	5,490	0	5,490	5,490	5,490	5,490	C
Big Bear Creek	07207	20	0	20	20	480	313	480	0	480	480	C

Allotment Name	Allotment Number	Permitted AUMs Alternative				BLM Acres	Other Acres	BLM Acres Available Alternative				Management Category <sup>1</sup>
		A	B	C	D			A	B	C	D	
Big Bucktail	17061	150	110	133	150	5,340	0	5,340	3,930	4,750	5,340	C
Big Gulch	03630	13	0	13	13	280	0	280	0	280	280	C
Big Gulch - 40	05036	6	6	6	6	40	0	40	40	40	40	C
Big Pasture	05044	15	15	15	15	200	1,821	200	200	200	200	C
Black Bullet	05045	15	15	15	15	240	0	240	240	240	240	C
Blue - Cimarron	03642	4	4	4	4	40	1,369	40	40	40	40	C
Bolinger Ditch	07219	8	0	8	8	120	120	120	0	120	120	C
Bramier Draw	07235	337	337	337	337	2,560	1,036	2,560	2,560	2,560	2,560	C
Broad Canyon	17199	80	80	80	80	1,760	1,657	1,760	1,760	1,760	1,760	C
Buck	07232	47	47	47	47	130	63	130	130	130	130	C
Buckeye	17033	48	48	48	48	810	0	810	810	810	810	C
Burn Canyon	17022	91	91	91	91	2,200	807	2,200	2,200	2,200	2,200	C
Burro Creek	05556	11	0	0	0	110	0	110	0	0	0	C
Burro Ridge	05532	15	15	15	15	200	606	200	200	200	200	C
Busted Boiler	03648	4	4	4	4	40	0	40	40	40	40	C
Camel Back Pasture	14010b	0	0	75	0	2,680	160	2,680	2,680	2,680	2,680	I
Canal	14012	798	777	798	798	7,870	0	7,870	7,660	7,870	7,870	I
Carpenter Ridge	17100	265	265	265	265	7,060	0	7,060	7,060	7,060	7,060	I
Cedar	05570	226	209	226	226	1,530	767	1,530	1,420	1,530	1,530	I
Cedar Creek	05535	6	5	6	6	200	960	200	160	200	200	C
Cedar Point	05012	3	3	3	3	40	0	40	40	40	40	C
Chaffee	00019	80	0	80	80	2,190	162	2,190	0	2,190	2,190	C
Chaffee Gulch	05528	106	106	106	106	600	141	600	600	600	600	C
Cimarron 40	03658	4	4	4	4	40	1,000	40	40	40	40	C
Cimarron Stock Driveway	03650	45	39	45	45	430		430	380	430	430	C
Coal Canyon	17107	60	60	60	60	5,240	190	5,240	5,240	5,240	5,240	C
Coal Creek	05509	42	31	42	42	300	203	300	230	300	300	C
Coal Gulch	14517	587	359	495	587	6,700	102	6,700	4,100	5,650	6,700	C
Coke Ovens	17027	224	212	224	224	7,550	379	7,550	7,150	7,550	7,550	C
Collins	05043	10	10	10	10	200	766	200	200	200	200	C
Cone	03635	5	0	5	0	80	0	80	0	80	0	C
Cookie Tree	05560	70	0	70	0	750	0	750	0	750	0	M

Allotment Name	Allotment Number	Permitted AUMs				BLM Acres	Other Acres	BLM Acres Available				Management Category <sup>1</sup>
		A	B	C	D			A	B	C	D	
Coventry	07222	70	70	70	70	860	0	860	860	860	860	C
Cow Creek	05566	70	0	70	70	520	316	520	0	520	520	C
Crawford Reservoir	05018	24	24	24	24	390	0	390	390	390	390	C
Creek Bottom	03632	5	0	5	0	160	0	160	0	160	0	M
Cushman	05506	728	716	728	728	6,650	53	6,650	6,550	6,650	6,650	C
Cut Off Allotment	05052	1	0	1	1	30	129	30	0	30	30	C
Dave Wood Road	05518	144	144	144	144	2,630	5	2,630	2,630	2,630	2,630	C
Davis Mesa Allot.	17037	250	220	250	250	4,050	0	4,050	2,690	4,050	4,050	I
Dead Horse Common	05010	10	10	10	10	110	0	110	110	110	110	M
Deep Creek	14524	3	3	3	3	180	643	180	180	180	180	M
Deer Basin - Midway	14019	900	428	900	900	11,640	809	11,640	5,540	11,640	11,640	C
Delta Pipeline	03277	563	253	563	563	6,020	4	6,020	2,700	6,020	6,020	C
Dexter Creek	05551	5	0	0	0	60	0	60	0	0	0	I
Dirty George	14023	133	133	133	133	1,470	5	1,470	1,470	1,470	1,470	C
Doby Canyon Indiv.	17042	12	12	12	12	2,630	0	2,630	2,630	2,630	2,630	C
Dolores Canyon	17004	123	107	123	123	2,900	354	2,900	2,510	2,900	2,900	I
Doug Creek	05028	60	60	60	60	400	625	400	400	400	400	C
Downing	05541	27	27	27	27	120	321	120	120	120	120	C
Dry Cedar	05537	360	11	360	360	4,770	22	4,770	140	4,770	4,180	M
Dry Creek	14549	133	127	133	133	1,800	0	1,800	1,710	1,800	1,800	C
Dry Creek Basin	05513	385	385	385	385	6,170	0	6,170	6,170	6,170	6,170	C
Dry Creek Place	05525	17	17	17	17	150	170	150	150	150	150	C
Dry Gulch	05540	250	204	250	250	5,500	500	5,500	4,500	5,500	5,500	I
Dry Park	07300	746	746	746	746	4,580	63	4,580	4,440	4,580	4,580	I
Duroy	03637	10	0	10	0	210	0	210	0	210	0	C
East Fork Dry Creek	05514	11	11	11	11	160	634	160	160	160	160	C
East Gould Reservoir	05041	20	20	20	20	600	691	600	600	600	600	C
East Paradox Common	17101	1,254	1,134	1,254	1,254	15,000	2,393	15,000	13,570	15,000	15,000	I
East Roatcap Ind.	14512	58	58	58	58	200	0	200	200	200	200	C
Far Away Allotment	17213	30	0	30	30	370	0	370	0	370	370	C
Feedlot	17078	13	13	13	13	260	412	260	260	260	260	C
Fire Mountain Canal	14508	10	0	10	10	120	0	120	0	120	120	C

Allotment Name	Allotment Number	Permitted AUMs Alternative				BLM Acres	Other Acres	BLM Acres Available Alternative				Management Category <sup>1</sup>
		A	B	C	D			A	B	C	D	
First Park	03645	10	4	10	10	220	656	220	100	220	220	C
Flatiron	05501	333	333	333	333	2,700	7	2,700	2,700	2,700	2,700	C
Franklin Mesa	05512	315	315	315	315	2,840	0	2,840	2,840	2,840	2,840	C
Gravel Pit	07063	43	24	40	43	980	0	980	550	910	980	C
Green	05503	39	39	39	39	750	298	750	750	750	750	C
Hairpin	05569	18	18	18	18	840	0	840	840	840	840	C
Hamilton Mesa	07209	26	26	26	26	410	1,035	410	410	410	410	C
High Park	05549	60	35	54	60	1,460	677	1,460	860	1,310	1,460	C
Highway 90	05521	313	313	313	313	6,000	202	6,000	6,000	6,000	6,000	C
Hillside	05562	40	40	40	40	120	39	120	120	120	120	C
Home Ranch	07201	79	79	79	79	1,020	5,700	1,020	1,020	1,020	1,020	C
Horse Bench	03634	40	0	40	40	970	0	970	0	970	970	C
Horsefly	05523	12	12	12	12	700	651	700	440	700	440	C
Horsefly Common	07301	50	50	50	50	880	0	880	780	880	880	C
Houser	07076	164	161	164	164	4,380	3,520	4,380	4,300	4,380	4,380	I
Hubbard Creek	14516	45	16	35	45	1,720	201	1,720	590	1,340	1,720	C
Joker	14014	2	2	2	2	50	0	50	50	50	50	M
Jumbo Mountain	14527	119	0	119	119	4,940	962	4,940	0	4,940	4,940	C
Juniper Knob	14505	18	0	18	18	590	0	590	0	590	590	C
Kinnikin	03643	16	16	16	16	160	0	160	160	160	160	C
La Sal Creek	17011	139	58	139	139	4,900	473	4,900	2,890	4,900	4,900	C
Lavender	07075	31	31	31	31	1,310	2,469	1,310	1,290	1,310	1,310	M
Lee Bench	14011	41	41	41	41	590	321	590	590	590	590	C
Lee Lands	17003	70	0	70	70	860	1,256	860	0	860	860	M
Leopard Creek	07205	12	0	12	0	320	404	320	0	320	0	M
Leroux	14550	158	63	158	158	1,980	243	1,980	790	1,980	1,980	C
Leroux Creek	14504	32	32	32	32	600	169	600	600	600	600	C
Lillylands-West	17024	224	220	224	224	2,530	830	2,530	2,490	2,530	2,530	C
Lion Canyon	17012	14	14	14	14	510	260	510	510	510	510	M
Lion Creek Basin	17044	350	350	350	350	5,300	12	5,300	5,300	5,300	5,300	C
Little Baldy	07223	175	0	175	175	1,400	1,910	1,400	0	1,400	1,400	C
Little Maverick Draw	07210	30	30	30	30	290	231	290	290	290	290	I



Allotment Name	Allotment Number	Permitted AUMs Alternative				BLM Acres	Other Acres	BLM Acres Available Alternative				Management Category <sup>1</sup>
		A	B	C	D			A	B	C	D	
Log Hill	05529	189	189	189	189	3,780	616	3,780	3,780	3,780	3,780	C
Lower Beaver Canyon	07211	50	0	50	0	670	0	670	0	670	0	C
Lower Hamilton	07234	81	81	81	81	720	311	720	720	720	720	C
Lower Horsefly Combined	05520	400	396	400	400	18,140	154	18,140	17,630	18,140	17,830	I
Lower Pinion	07213	3	1	2	3	210	581	210	100	200	210	C
Lower Roc Creek	07216	5	0	5	5	110	173	110	0	110	110	I
Lower Roubideau Cyn.	05000	24	24	24	24	570	120	570	570	570	570	C
Mailbox Park	17001	194	166	183	194	6,860	2,852	6,860	5,830	6,460	6,860	M
Maverick Draw Allot	17018	73	47	64	73	2,020	158	2,020	1,290	1,770	2,020	C
Mcdonald Creek	14532	209	75	209	209	3,820	0	3,820	1,370	3,820	3,820	C
Mckee Draw	07206	74	44	74	74	1,420	0	1,420	860	1,420	860	C
Mesa Creek Crmp	17014	4,255	4249	4,255	4,255	93,010	7,065	93,010	92,880	93,010	93,010	I
Middle Hamilton Lease	07233	75	75	75	75	1,190	584	1,190	1,190	1,190	1,190	C
Milk Creek	14544	13	8	13	13	100	0	100	60	100	100	C
Moonshine Park	05563	7	0	7	7	240	636	240	0	240	110	C
Morrow Point	03631	5	0	5	5	130	192	130	0	130	130	C
Mud Springs	07230	593	593	593	593	3,950	242	3,950	3,950	3,950	3,950	C
Muddy Creek	14519	16	16	16	16	520	1,035	520	520	520	520	C
Naturita Canyon	07203	28	28	28	28	660	127	660	660	660	660	C
Naturita Ridge	17035	440	440	440	440	9,410	321	9,410	9,410	9,410	9,410	C
Needle Rock Allotment	14542	8	0	8	8	40	82	40	0	40	40	C
North Saddle Peak	14540	20	0	20	0	210	451	210	0	210	0	C
North Wickson Draw	17023	30	30	30	30	1,150	5,055	1,150	1,150	1,150	1,150	C
Norwood Hill Allot.	07218	9	0	9	9	190	160	190	0	190	190	C
Nyswanger	17082	50	0	50	0	3,490	62	3,490	0	3,490	0	C
Oak Hill	07225	5	5	5	5	40	650	40	40	40	40	C
Oak Hill 40	03644	4	4	4	4	40	0	40	40	40	40	C
Oak Mesa	14506	51	51	51	51	850	575	850	840	850	850	C
Oak Ridge Common	14528	417	414	417	417	3,640	89	3,640	3,620	3,640	3,640	C
Olathe Res. East	03649	20	0	20	20	200	0	200	0	200	200	C
Onion Lakes	05533	30	0	30	30	470	0	470	0	470	470	C
Overland	14511	30	30	30	30	160	358	160	160	160	160	C

Allotment Name	Allotment Number	Permitted AUMs Alternative				BLM Acres	Other Acres	BLM Acres Available Alternative				Management Category <sup>1</sup>
		A	B	C	D			A	B	C	D	
Park Allotment	17030	68	68	68	68	1,040	1,805	1,040	1,040	1,040	1,040	C
Parkway	17062	35	20	33	35	1,130	0	1,130	640	1,080	1,130	C
Petrie Mesa	14022	104	12	104	104	2,840	360	2,840	320	2,840	2,840	C
Pine Ridge	05040	14	14	14	14	80	0	80	80	80	80	C
Piney Allotment	05516	373	373	373	373	3,740	973	3,740	3,740	3,740	3,740	I
Pinion	03641	55	0	55	0	950	0	950	0	950	0	I
Pinyon Springs	05033	1	1	1	1	10	0	10	10	10	10	C
Pipeline	05507	600	600	600	600	10,190	22	10,190	10,190	10,190	10,190	C
Pocket Ind	17085	5	5	5	5	1,320	0	1,320	1,320	1,320	1,320	C
Point Creek	14021	101	63	101	101	1,610	4,364	1,610	1,010	1,610	1,610	C
Popp Ranch	14531	11	9	11	11	200	2,036	200	160	200	200	C
Radio Tower	02660	14	11	14	14	420	630	420	340	410	420	C
Ragsdale	03708	10	0	10	10	170	0	170	0	170	170	C
Rawhide - Coffee Pot	05034	33	33	33	33	1,250	0	1,250	1,250	1,250	1,250	C
Rawlings Individual	17021	18	0	18	18	380	22	380	0	380	380	C
Ray (Wray) Mesa	03298	802	802	802	802	23,080	32	23,080	23,080	23,080	23,080	M
Redvale	07227	20	20	20	20	380	0	380	380	380	380	C
Reynolds/ McDonald	14530	274	231	270	274	4,610	26	4,610	3,890	4,530	4,610	C
Rim Rock Allotment	05051	1	0	1	1	80	1,037	80	0	80	80	C
River	17079	22	22	22	22	1,390	1,422	1,390	1,390	1,390	1,390	C
River Allotment	07200	117	10	117	117	2,710	408	2,710	200	2,710	2,710	C
Roatcap	05504	264	264	264	264	2,810	181	2,810	2,810	2,810	2,810	C
Roatcap - Jay Creek	14507	955	404	948	955	9,430	3,190	9,430	3,990	9,360	9,430	I
Roc Creek Allotment	17020	28	0	28	28	1,310	472	1,310	0	1,310	1,310	I
Rock Ditch	05538	9	0	9	9	60	75	60	0	60	60	C
Round Top	03867	4	0	4	0	40	0	40	0	40	0	M
Rowher Canyon	17080	30	30	30	30	670	197	670	670	670	670	C
San Miguel Rim	03639	46	0	46	0	930	0	930	0	930	0	M
San Miguel River	03640	63	0	63	0	1,260	0	1,260	0	1,260	0	I
Sandy Wash	05502	707	707	707	707	7,260	161	7,260	7,260	7,260	7,260	I
Saw Pit	03636	12	0	12	0	240	0	240	0	240	0	C
Sawmill Mesa	14007	37	25	37	37	700	3,955	700	470	700	700	I

Allotment Name	Allotment Number	Permitted AUMs Alternative				BLM Acres	Other Acres	BLM Acres Available Alternative				Management Category <sup>1</sup>
		A	B	C	D			A	B	C	D	
Sawtooth	17032	488	488	488	488	24,010	1,140	24,010	24,000	24,010	24,010	I
Second Park	17105	40	40	40	40	770	4,291	770	770	770	770	C
Section 35	14547	22	22	22	22	70	51	70	70	70	70	M
Sewemup	03646	75	0	75	0	1,510	0	1,510	0	1,510	0	C
Shamrock	05024	51	0	51	51	590	0	590	0	590	590	C
Shavano Mesa	05511	200	182	200	200	2,090	0	2,090	1900	2,090	2,090	C
Shinn Park/South Canal	05534	288	57	288	288	5,830	25	5,830	1150	5,830	5,230	I
Slagle Pass	05547	30	30	30	30	290	329	290	290	290	290	M
Slaughter Grade	03651	5	0	5	0	40	0	40	0	40	0	C
Smith Fork Ind.	05049	6	3	6	6	460	207	460	80	460	460	C
Smith Fork Rim	03526	16	0	16	16	160	0	160	0	160	160	C
South Branch	14004	101	101	101	101	830	224	830	830	830	830	M
South Dry Creek	14548	50	3	50	50	1,200	400	1,200	70	1,190	1,200	C
South Of Town	14534	369	2	369	369	3,840	4,356	3,840	20	3,840	3,840	C
South Piney	05515	184	184	184	184	4,620	0	4,620	4,620	4,620	4,620	C
Spring Creek	05517	59	59	59	59	450	62	450	450	450	450	C
Spring Crk. & Hwy 90	03638	35	0	35	35	550	160	550	0	550	550	M
Spring Crk. Canyon	03659	0	0	0	0	2,290	0	2,290	2,290	2,290	2,290	C
Spring Gulch	05029	111	111	111	111	1,160	1,273	1,160	1,160	1,160	1,160	C
Stevens Gulch Common	14513	73	61	73	73	4,760	1,352	4,760	3960	4,760	4,760	C
Stingley Gulch	14503	98	0	74	0	1,130	0	1,130	0	850	0	C
Stock Driveway	14521	32	32	32	32	160	221	160	160	160	160	C
Sundown	03633	70	0	70	70	1,350	0	1,350	0	1,350	1,350	C
Sunrise Gulch	17102	63	63	63	63	1,540	1,304	1,540	1,540	1,540	1,540	C
Sunshine Mesa	14541	5	0	5	0	40	177	40	0	40	0	C
Swain Bench	17081	23	23	23	23	3,080	57	3,080	3,080	3,080	3,080	C
Tabeguache Creek	17031	660	660	660	660	18,320	1,002	18,320	17,710	18,320	18,320	C
Tappan Creek	05575	18	0	0	0	410	0	410	0	0	0	C
Taylor Draw	05555	18	18	18	18	640	479	640	640	640	640	M
Third Park Common	17103	391	391	391	391	3,860	14	3,860	3,860	3,860	3,860	M
Tinkler Individual	05530	20	17	20	20	2,160	456	2,160	1830	2,160	2,160	C
Transfer Road	05505	214	214	214	214	2,740	126	2,740	2,740	2,740	2,740	C

Allotment Name	Allotment Number	Permitted AUMs				BLM Acres	Other Acres	BLM Acres Available				Management Category <sup>1</sup>
		A	B	C	D			A	B	C	D	
Tuttle Draw	17106	39	39	39	39	1,330	57	1,330	1,330	1,330	1,330	C
Twenty-Five Mesa - So.	07008	329	225	298	329	5,750	470	5,750	3,930	5,210	5,750	I
Un-allotted		1,242	0	980	0	28,870	0	28,870	0	22,750	0	C
Uncompahgre Bench	07007	329	329	329	329	5,210	160	5,210	5,210	5,210	5,210	C
Uncompahgre Common	07302	58	0	58	58	260	3,200	260	0	260	260	C
Upper Mailbox Allot.	07208	176	51	176	176	720	41	720	580	720	720	C
Upper Maverick Draw	07202	6	6	6	6	490	1,433	490	490	490	490	C
Upper Terror Creek	14514	59	52	59	59	550	223	550	490	550	550	C
Wakefield	03628	5	0	5	5	20	5	20	0	20	20	C
Ward Creek Doughspoon	14025	445	177	445	416	17,180	4,228	17,180	4530	17,180	14,930	I
Washboard Rock	05548	34	34	34	34	1,010	4,104	1,010	1,010	1,010	1,010	C
Waterdog Basin	05546	35	35	35	35	390	392	390	390	390	390	C
Weimer Hill Place	03660	8	8	8	8	80	0	80	80	80	80	C
Wells Gulch	14016	1,460	802	1,460	1,460	10,410	140	10,410	5720	10,410	10,410	C
West Roatcap	14510	88	88	88	88	200	0	200	200	200	200	C
West Stevens Gulch	14515	168	168	168	168	1,670	803	1,670	1,670	1,670	1,670	C
West Youngs Peak	14536	25	3	25	25	200	281	200	30	200	200	C
White Ranch	14015	10	10	10	10	480	352	480	150	480	480	I
Wickson Draw	17010	305	305	305	305	3,510	606	3,510	3,510	3,510	3,510	I
Wilbanks	14502	443	423	443	443	3,070	0	3,070	2930	3,070	3,070	C
Williams Creek	14523	8	8	8	8	110	1,012	110	110	110	110	C
Williams Ditch Allot.	07220	5	5	5	5	20	81	20	20	20	20	C
Winter-Monitor Mesa	14010	774	774	774	774	15,750	186	15,750	15,440	15,750	15,750	I
Youngs Peak	14537	113	12	113	113	2,130	0	2,130	300	2,130	2,130	C
<b>Total</b>		38,364	29,862	37,926	36,424	658,540	132,935	658,540	510,070	647,900	611,560	

Light gray shading indicates allotment acres available for livestock grazing varies by alternative.

<sup>1</sup>Maintain (M), Improve (I), or Custodial (C).



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# Appendix F

Summary of the Uncompahgre Planning Area  
Wilderness Characteristics Inventory: 2015 Update



# **APPENDIX F**

## **SUMMARY OF THE UNCOMPAHGRE PLANNING AREA WILDERNESS CHARACTERISTICS INVENTORY: 2015 UPDATE**

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### **INTRODUCTION**

As part of the land use planning process for the Uncompahgre Resource Management Plan (RMP), the BLM assessed public lands within the Uncompahgre RMP Planning Area (planning area) to determine whether wilderness characteristics are present outside of designated wilderness, existing wilderness study areas (WSAs), and the congressionally-designated Tabeguache Area. The BLM reviewed original 1980 wilderness inventories, as well as lands proposed by BLM staff and the public, in order to identify lands with potential wilderness characteristics.

This appendix provides summary information about the wilderness characteristics inventory. The *Uncompahgre Planning Area Wilderness Characteristics Inventory: 2015 Update* report provides more detail, including maps of each inventoried area. The report is available on the Uncompahgre RMP Web site ([http://www.blm.gov/co/st/en/fo/ufo/uncompahgre\\_rmp.html](http://www.blm.gov/co/st/en/fo/ufo/uncompahgre_rmp.html)).

Of the eight areas identified through the review, seven were found to possess wilderness characteristics. The BLM developed a range of RMP alternatives and analyzed impacts associated with the various management prescriptions designed to protect these characteristics. Decisions could protect all, some (including portions of some), or none of the identified lands.

### **BLM Authority and the Land Use Planning Process**

Land use plans identify broad-scale decisions to guide future land management actions and subsequent site-specific implementation decisions. The BLM Land Use Planning Handbook (1601-1) provides guidance to BLM employees for implementing BLM land use planning requirements. In addition, Appendix C, Section 1.K of BLM Handbook 1610-1 (Wilderness Characteristics) directs BLM field offices to identify decisions to protect or preserve wilderness characteristics (including sufficient size, naturalness, and outstanding opportunities for solitude or primitive and unconfined recreation). Specific guidance for inventorying wilderness

characteristics is provided through BLM Manual Section 6310, Conducting Wilderness Characteristics Inventory on BLM Lands. Guidance for considering wilderness characteristics in the BLM land use planning process is provided through BLM Manual Section 6320, Considering Lands with Wilderness Characteristics in the BLM Land Use Planning Process.

While BLM authority to conduct wilderness reviews and establish new wilderness study areas under FLPMA Section 603 expired in 1993, the BLM has authority under FLPMA sections 102 and 201 to maintain a current inventory of all public lands and their resources, including wilderness characteristics. Through the land use planning process, the BLM must consider all available information to determine the mix of resource use and protection that best serves the FLPMA multiple-use mandate.

The management of areas found to possess wilderness characteristics is addressed through the development of a range of RMP alternatives. Within each alternative, the BLM identifies appropriate portions of land and develops effective management strategies (including management prescriptions, stipulations, and allowable uses).

The five existing WSAs within the planning area will continue to be managed to protect their wilderness characteristics according to policy in BLM Manual 6330, Management of Wilderness Study Areas, until Congress designates them as wilderness or releases them for other uses.

### **Scope of Assessment**

The BLM considered and evaluated wilderness characteristics for all BLM lands within the planning area outside of existing WSAs and the Tabeguache Area. The assessment did not include national forest lands or BLM lands within the Gunnison Gorge or Dominguez-Escalante National Conservation Areas.

The FLPMA requires that the BLM maintain a current inventory of conditions and resources on public lands, including wilderness characteristics. The last inventory of wilderness characteristics was completed more than 30 years prior to this RMP revision. This update of the UFO wilderness characteristics inventory takes into consideration the possibility that conditions on the ground may have changed during this interval.

In performing this assessment, the UFO:

- 1) Reviewed the 1980 BLM Intensive Wilderness Inventory and updated information when necessary to ensure that information was current and accurate
- 2) Reviewed proposals to inventory and protect BLM lands with wilderness characteristics submitted by BLM staff and the public
- 3) Assessed potential lands in the planning area identified through BLM staff and public wilderness proposals or acquired since the 1980 inventory

### **WILDERNESS CHARACTERISTICS**

BLM Manual 6310-1 defines wilderness characteristics as consisting of: 1) sufficient size, 2) naturalness, 3) outstanding opportunities for solitude or primitive and unconfined recreation,



and 4) supplemental values. To have wilderness characteristics, an area must meet each of the first three criteria as described below.

### **Sufficient Size**

The area is roadless and has over 5,000 acres of contiguous BLM lands, or is of sufficient size to make practicable its use in an unimpaired condition. Areas adjacent to wilderness areas or WSAs that are less than 5,000 acres may have wilderness characteristics. State or private lands are not included in making this acreage determination.

### **Roadless Definitions**

For purposes of conducting wilderness characteristics inventories, the BLM uses definitions found on page 17 of House Report 94-1163 (May 15, 1976), released prior to the enactment of FLPMA. In the report, roadless refers to:

...the absence of roads which have been improved and maintained by mechanical means to insure relatively regular and continuous use. A way maintained solely by the passage of vehicles does not constitute a road.

The BLM adopted the following sub-definitions of words and phrases related to roads:

- Improved and maintained: Actions taken physically by people to keep the road open to vehicle traffic. “Improved” does not necessarily mean formal construction. “Maintained” does not necessarily mean annual maintenance.
- Mechanical means: Use of hand or power machinery or tools.
- Relatively regular and continuous use: Vehicular use that has occurred and will continue to occur on a relatively regular basis. Examples are: access roads for equipment to maintain a stock water tank or other established water sources, which may entail lengthy return intervals for this purpose; access roads to maintained recreation sites or facilities; or access roads to mining claims.

A route established or maintained solely by the passage of vehicles would not be considered a road, even if it is used on a relatively regular and continuous basis. Vehicle routes constructed by mechanical means but that are no longer being maintained by mechanical methods are not roads. Sole use of hands and feet to move rocks or dirt without the use of tools or machinery does not meet the definition of “mechanical means.” Roads need not be “maintained” on a regular basis but rather “maintained” when road conditions warrant actions to keep it in a usable condition. A dead-end (cherry-stem) road can form the boundary of an inventory area and does not by itself disqualify an area from being considered “roadless.”

### **Naturalness**

Lands and resources exhibit a high degree of naturalness when affected primarily by the forces of nature and where the imprint of human activity is substantially unnoticeable (BLM Manual Section 6320).

The naturalness of an area may be influenced by the presence or absence of roads and trails, fences or other developments; the nature and extent of landscape modifications; the presence

of native vegetation communities; and the connectivity of habitats. The presence and diversity of wildlife species are recognized as an indicator of naturalness.

Examples of human-made features that may be considered substantially unnoticeable in certain cases are: trails, trail signs, bridges, fire towers, fire breaks, fire pre-suppression facilities, pit toilets, fisheries enhancement facilities, fire rings, hitching posts, snow gauges, water quantity and quality measuring devices, research monitoring markers and devices, radio repeater sites, air quality monitoring devices, fencing, spring developments, overgrown and barely visible two-track ways, and small reservoirs.

### **Outstanding Opportunities for Solitude or a Primitive and Unconfined Type of Recreation**

#### ***Solitude***

Visitors may have outstanding opportunities for solitude when the sights, sounds, and evidence of other people are rare or infrequent, or where visitors can feel isolated, alone or secluded from others.

#### ***Primitive and Unconfined Recreation***

Visitors may have outstanding opportunities for primitive and unconfined types of recreation where the use of the area is through non-motorized, non-mechanical means, and where no or minimal developed recreation facilities are encountered.

#### **Supplemental Values**

The area may contain ecological, geological, or other features of scientific, educational, scenic, or historical value.

Supplemental values may be present within the inventory units but are not a required component of wilderness character; they will be described but not used as a mechanism to impact a final finding.

### **ASSESSMENT PROCESS**

In accordance with BLM policy outlined in BLM Manual Section 6310, the BLM assessment team:

- Analyzed GIS data to identify blocks of BLM land: (1) greater than 5,000 acres or adjacent to a WSA, designated wilderness, or the Tabeguache Area; and (2) that do not contain improved and maintained BLM roads, county roads, or highways (wilderness inventory roads).
- Assessed BLM 2013 one-meter aerial imagery and DigitalGlobe World Imagery (30 centimeter) to eliminate blocks of land that clearly lack wilderness characteristics of naturalness. The most common features indicating a lack of naturalness included obvious vegetative manipulations (such as chaining and rollerchopping) and distinct roads, dams, ditches, seismic exploration lines, and contour furrows.
- Consulted with BLM field staff familiar with assessment areas to elicit additional information and substantiate findings regarding areas eliminated from consideration.

- Conducted field visits in order to verify preliminary findings and complete inventories for qualifying areas.

### **Assessment Tools**

The BLM assessment team utilized the following tools in evaluating areas for consideration and in completing the wilderness characteristics assessment:

#### ***Past Wilderness Inventories***

The BLM reviewed the 1980 BLM Intensive Wilderness Inventory, Final Wilderness Study Areas report and maps for areas that had been assessed for the presence of wilderness characteristics, but were not included within a WSA. Because the original report documentation was not available, all aspects of an area were considered in this assessment, making it more comprehensive than a simple update.

This review enabled the BLM to determine whether any new information is available that was not considered as part of the original inventories. As the larger landscape experiences population growth and increased development, perceptions regarding what constitutes solitude and outstanding opportunities for primitive and unconfined recreation change. Interest in arid and low elevation environments has also increased. Therefore, some information related to social values submitted by the public was considered “new information” based on changed physical conditions of the land and social perceptions of wilderness characteristics that may have occurred over time.

#### ***Public Wilderness Proposals***

External groups advocate for wilderness designation through legislation and participation in the land use planning process. The BLM considered (in 2010) the most recent proposal for protection of wilderness characteristics submitted by the Colorado Wilderness Network. This coalition is made up of national and statewide organizations (including the Colorado Environmental Coalition, Colorado Mountain Club, Environment Colorado, Sierra Club, The Wilderness Society, and Western Colorado Congress), as well as local citizens groups (including the Central Colorado Wilderness Coalition, High Country Conservation Advocates (formerly High Country Citizens Alliance), Ridgway-Ouray Community Council, San Juan Citizens Alliance, Sheep Mountain Alliance, Wild Connections, and Wilderness Workshop).

In 2013, The Wilderness Society proposed other polygons that may possess wilderness characteristics. They provided basic maps, a shapefile for use in GIS, and a table of proposed areas. The BLM carefully reviewed the proposed areas. The result was the addition of two units that were not included in the 2011 update to the UFO wilderness characteristics inventory: the Adobe Badlands WSA Adjacent Unit and the Lower Tabeguache-Campbell Creek Unit. Both units are included in this inventory update.

#### ***Other Documents and Data***

The following information sources were considered in drafting the assessment:

- Field investigation notes
- Range improvement records (UFO Range Management Specialist and GIS)

- Colorado Natural Heritage Program databases (including potential conservation areas, rare plants, natural plant communities, raptors, and bats)
- Colorado Wilderness Network proposed wilderness GIS data layer (2007)
- Map and correspondence from The Wilderness Society (2013)
- BLM LR2000 databases (including rights-of-way, mining claims, and oil and gas leasing)
- Dry Creek Travel Management Plan (2009)
- UFO Travel Management Plan (2010)
- UFO road maintenance records
- UFO range allotment management records
- UFO cultural database
- UFO oil and gas lease GIS data sets
- UFO travel and transportation GIS data sets

### ASSESSMENT AREAS

The wilderness characteristics assessment describes known valid existing rights, grandfathered uses, and public land investments within the survey areas. BLM staff verified new information during field surveys.

**Table F-1**, Planning Area Lands Assessed for Wilderness Characteristics, identifies the planning area lands detailed within this assessment.

**Table F-1**  
**Planning Area Lands Assessed for Wilderness Characteristics**

<b>Name</b>	<b>Total Inventoried Acreage*</b>	<b>Acreage with Wilderness Characteristics</b>	<b>Acreage without Wilderness Characteristics</b>
Adobe Badlands WSA Addition	16,520	6,180	10,340
Camel Back WSA Adjacent	8,700	6,950	1,750
Dolores River Canyon WSA Adjacent	32,650	550	32,100
Dry Creek Basin	16,890	7,030	9,860
Lower Tabeguache/Campbell Creek	11,200	11,060	140
Norwood Canyon	5,600	0	5,600
Roc Creek	7,650	5,480	2,170
Shavano Creek	6,100	4,900	1,200

\*Reflects total BLM acreage within the planning area submitted by the Colorado Wilderness Network, including acreage within existing WSAs. Acreages generated through GIS mapping may vary due to rounding inconsistencies and different mapping techniques.



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# Appendix G

Best Management Practices and  
Standard Operating Procedures



# **APPENDIX G**

## **BEST MANAGEMENT PRACTICES AND STANDARD OPERATING PROCEDURES**

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This appendix provides a list of common standard operating procedures and best management practices that are applicable to all alternatives in the resource management plan. Standard operating procedures are established guidelines that are followed by the BLM in carrying out management activities. While the list of standard operating procedures is complete, the list is not intended to be comprehensive; additional standard operating procedures could be developed and implemented to support achieving resource objectives.

Best management practices are state-of-the-art mitigation measures applied on a site-specific basis to avoid, minimize, reduce, rectify, or compensate for adverse environmental or social impacts. They are applied to management actions to aid in achieving desired outcomes for safe, environmentally responsible resource development, by preventing, minimizing, or mitigating adverse impacts and reducing conflicts. Best management practices can also be proposed by project applicants for activities on public lands (e.g., for gas drilling). Best management practices not incorporated into the permit application by the applicant may be considered and evaluated through the environmental review process and incorporated into the use authorization as conditions of approval or rights-of-way stipulations. Standard conditions of approval and rights-of-way stipulations are also provided in this appendix as appropriate. Additional best management practices, conditions of approval, and rights-of-way stipulations could be developed to meet resource objectives based on local conditions and resource specific concerns.

### **AIR QUALITY**

- Air quality standards are governed by the Clean Air Act of 1990 (as amended) (42 United States [US] Code Chapter 85). The US Environmental Protection Agency is charged with setting National Ambient Air Quality Standards, currently found at <http://www.epa.gov/air/criteria.html> (US Environmental Protection Agency 2014). At the state level, the Colorado Department of Public Health and Environment has established its standards (Colorado Department of Public Health and Environment 2014).

- Require drill rig engines to meet US EPA requirements.
- Require all engines and ancillary equipment and methods to employ best available control technology with regard to air pollution reduction when operating on BLM lands.

### **References**

Colorado Department of Public Health and Environment. 2014. Air Quality Control Commission Regulations. Internet Web site: <https://www.colorado.gov/pacific/cdphe/aqcc-regs>. Accessed on December 29, 2014.

US Environmental Protection Agency. 2014. National Ambient Air Quality Standards. Internet Web site: <http://www.epa.gov/air/criteria.html>. Accessed on December 29, 2014.

### **GEOLOGY, SOILS, AND WATER**

- Implement guidelines from BLM Technical Reference 1737-17 (Sada et al. 2001), to protect or restore the functions of springs.
- Measures designed to minimize erosion and water quality deterioration will be required in the site-specific plans for surface-disturbing land use activities.
- Implement BMPs from the BLM/USGS Mancos shale research findings (Murphy 2011) applicable to livestock management, recreation management (e.g. location and limitations of OHV use areas), rights-of-way, and other surface disturbing activities.
- Implement guidelines from BLM Technical Reference 1730-2 (BLM 2001), to protect or restore the functions of biological soil crusts.
- Require professional geotechnical engineering, reclamation plans, and stormwater management plans meeting the following conditions in areas having fragile soils for solid and fluid mineral development:
  - Restore site productivity.
  - Adequately control surface runoff.
  - Protect off-site areas from accelerated erosion such as rilling, gully, piping, and mass wasting.
  - Prohibit surface-disturbing activities during periods when soil is saturated.
  - Prohibit construction when soils are frozen.
- Ensure stream crossings by roads/utilities are designed to withstand high flows and will not degrade stream channels, water quality or riparian resources.

### **Soils**

- To minimize impacts to the aquatic and riparian systems, utilities or infrastructure should preferably be co-located in existing corridors or located in areas of existing disturbance or bored underneath river systems.
- Minimize the area of bare soil within the approved work zone as much as possible.



- Where applicable, cover entrances of construction sites with gravel to prevent trucks from tracking sediment from the construction site onto roads. This sediment will eventually end up clogging roadway drainage systems or settling into wetlands.
- Minimize soil exposure to erosional forces of wind and water by waiting until just before beginning construction to clear vegetation and to disturb the soil.
- Protect and maximize existing native vegetation and natural forest/rangeland to reduce impervious areas on the site.
- Use mechanical treatment methods to roughen and aerate soils in degraded sites identified for reclamation.
- Disperse stormwater to areas or undisturbed forest/rangeland wherever possible, rather than concentrating it into channels.
- Determine the volume of available topsoil existing on the site. Topsoil should be spread at a minimum uncompacted depth of 4 inches (or as appropriate determined by soil type).
- Allow sufficient time in scheduling for topsoil to be spread and bonded with the subsoil prior to seeding or planting.
- Topsoil must be salvaged during road construction and respread to the greatest degree practical on cut slopes, fill slopes, and borrow ditches prior to seeding. Road shape should be built using the borrow ditch subsoil.
- Properly store topsoil to protect it from erosion and compaction, assure that it remains identifiable (i.e., signed), viable, and available for redistribution during later stages of reclamation. Topsoil piles that will be stored for more than one month should be seeded with an approved BLM seed mix, stabilized with certified weed free erosion fabric or mulch, and may require fencing. When topsoil will be stored for more than one year and other resource values can be accommodated, topsoil should be stored in piles with a depth of two feet or less.
- Vegetative and structural soil stabilization practices will be required on cut and fill slopes off the working surfaces and in areas near water features, e.g., streams (including ephemeral drainages, ponds, and wetlands), or in other situations where wind or water erosion may otherwise accelerate movement of sediments.
- Utilize erosion control structures including but not limited to head-cut lay backs, rock structures, check dams, and sediment basins to retain soils in highly erodible areas and protect water quality.

### **Mancos Shale**

- To minimize mobilization of selenium as well as the transport of salts and sediment, discharge of groundwater to surface water drainages in areas of mapped Mancos shale, saline soils, or fragile soils will be prohibited.
- To minimize mobilization of selenium, limit spreading water over native road surfaces (e.g. dust abatement) in areas of mapped Mancos shale. Alternate methods for controlling fugitive dust (e.g. proper road surfacing and maintenance, limiting

vehicle speeds, etc...) are preferred in these locations. Alternate methods will be subject to BLM approval.

- Inhibit percolation of surface water through mapped Mancos shale areas by lining water retention/storage structures not associated with typical stormwater pollution prevention plans (e.g. tailing ponds, stock ponds, etc.). Liner material will subject to BLM approval.
- Limit surface disturbance near drainage features and minimize total surface disturbance on mapped Mancos shale areas.

The following BMPs are from *The Status of Our Knowledge and Best Management Practices for Surface Disturbing Activities on Mancos Shale Dominated Landscapes in Western Colorado* (Murphy 2011).

#### **Synoptic Scale BMPs**

- In general the hydraulic or flow path distance from soil disturbances should be located as far from perennial water sources as possible. Small drainage basins and larger alluvial valleys exhibiting ephemeral channels can allow for long term storage of sediment, salinity and selenium produced during episodic climatic events, attenuating and increasing the time for these constituents to enter perennial water courses. (Report 6. Significance of Ephemeral and Intermittent Streams in the Arid and Semi-arid American Southwest)
- To the extent practical, soil surface disturbances should avoid being located on the Montezuma Valley, Juana Lopez, Blue Hill, or Fairport members of the Mancos shale, as these geologic units exhibit the highest concentrations of dissolvable salts. The Montezuma Valley and Juana Lopez also have the highest concentration of selenium. (Report 1. Mancos Shale Stratigraphy and Chemistry)
- Maintaining healthy soil surface conditions on Mancos shale landscapes is more effective for the long term in limiting the yield of sediment, salinity and selenium than physical retention/detention structures (e.g. Elephant Skin Wash Project in the Gunnison Gorge NCA, and the existing earthen check dams in Peach Valley and Candy Lane areas. These two efforts are not noted above: the Elephant Skin Wash project was constructed as a pilot project to test the effectiveness of structural facilities at retaining salinity in 1985. The environmental assessment and monitoring data are contained in the UFO central files. In summary the project was effective at capturing and retaining salinity but at very high construction and maintenance costs. The check dam inventory is an ongoing effort to locate and assess the condition of thousands of earthen check dams constructed on areas dominated by Mancos shale in the UFO during the 1960's. Many of the check dams inventoried have reached storage capacity with sediment deposition, are breached and eroding, have altered the natural hydrologic function of the basins in which they reside, and have established stands of invasive plants).
- Require an analysis of impacts to biological soil crusts and appropriate stipulations on all use applications, such as rights-of-way, oil and gas and other exploration

permits, permits to drill, etc. (Report 7. TR-1730-2 – Biological Soil Crusts: Ecology and Management)

***Livestock Management BMPs***

- Locate livestock water and salt (or other supplements) on sites with low potential for biological soil crust development and in areas that discourage livestock from loitering. In many areas, sites with high rock cover are good options, or in previously disturbed sites, and at least 0.5-mile from riparian and other key important plant communities. Livestock trailing preferences need to be considered when evaluating locations. (Report 7. TR-1730-2 – Biological Soil Crusts: Ecology and Management, Report 3. Patterns in the Aggregate Stability of Mancos Shale Derived Soils)
- Using brush barriers or fence segments to divert trailing. Sites with high potential for biological soil crust development are often not preferred by livestock for forage; however, these same sites may be open and easy to walk across. Because of lack of forage, minimal barriers are usually sufficient to discourage access. (Report 7. TR-1730-2 – Biological Soil Crusts: Ecology and Management, Report 3. Patterns in the Aggregate Stability of Mancos Shale Derived Soils)
- Bedding grounds for livestock (sheep) should be selected on sites with relatively low cover of biological soil crust and vegetation, and closely monitoring for overuse impacts (Report 7. TR-1730-2 – Biological Soil Crusts: Ecology and Management, Report 3. Patterns in the Aggregate Stability of Mancos Shale Derived Soils).
- Bedding sites shall be moved daily, and the new site shall be at least 0.25-mile from previous site.
- All livestock water facilities should be made impervious to prevent water percolation in to Mancos shale. More detailed BMP's on water facilities are included in the Miscellaneous BMP Section (Report 9. Gunnison Basin Selenium Task Force).
- Drought management plans that address livestock management on excessively dry years should be prepared and implemented. Livestock use during dry conditions can reduce plant vigor, and excessively impact biological soil crust and physical soil crusts. Physical soils crusts which typically reform with precipitation provide protection from wind erosion (Report 7. TR-1730-2 – Biological Soil Crusts: Ecology and Management, and report preparers experience).
- Develop terms and conditions on grazing permits to reduce accelerated sediment salinity/selenium yields (e.g. season of use, distribution, bedding grounds, levels of use on sensitive areas (north aspects), levels of use in and around channels, grazing use impact on cryptogams, etc.) (Livestock Management Guidelines)

***Recreation Management BMPs***

- Restrict road locations to less sensitive areas. Road drainage (culverts, water bars) should be designed so that erosion or sediment fill of adjacent off-site areas is minimized. (Report 7. TR-1730-2 – Biological Soil Crusts: Ecology and Management)

- Promote extensive, low-density uses, such as hiking and backpacking, during late fall and winter periods. Restrict surface disturbing activities during dry seasons. (Report 7. TR-1730-2 – Biological Soil Crusts: Ecology and Management)
- Permit high-density, high-impact uses for short durations during late fall and winter, preferably when soils are frozen. Areas should be rotated based on a total allowable disturbance threshold with long recovery periods (greater than 10 years minimum on moderate- to high-resiliency sites). Exclude low-resiliency sites. (Report 7. TR-1730-2 – Biological Soil Crusts: Ecology and Management)
- Provide designated trails, and restrict use to trails in high density recreational areas. (Report 7. TR-1730-2 – Biological Soil Crusts: Ecology and Management)
- Provide interpretive sites and literature on recognition and value of protecting biological soil crusts at major access points in areas of extensive or unique crust formation. (Report 7. TR-1730-2 – Biological Soil Crusts: Ecology and Management)
- A current inventory, monitoring, and maintenance plan for all trails, facilities and other surface disturbing uses should be maintained. Monitoring methods such as Extreme Close range Photogrammetry should be used to continue to improve the knowledge base of erosion processes over time on Mancos shale landscapes. (Report 4. Hillslope Erosion Monitoring with Extreme Close-Range Photogrammetry and Report 8. US Geological Survey, Open-File Report 2007-1353, 225 p. Environmental effects of off-highway vehicles on Bureau of Land Management lands).
- The following topographic factors should be considered when locating trails on Mancos shale landscapes (Report 2. Variation of Surface Soil Salinity on Steep Mancos Shale Terrain and Report 3. Patterns in the Aggregate Stability of Mancos Shale Derived Soils)
  - Soil surface disturbance should be avoided on steep northerly aspects, as vegetation cover and biological soil crust provide a relatively high level of protection against erosion.
  - Steep southerly aspects exhibit the highest rates of natural erosion due to the lack of vegetation and biological soil crust cover, and if disturbed would be expected to show the lowest increase in erosion compared to similar slopes on other aspects.
  - Where possible, on steeper slopes trails should be located on areas that exhibit divergent flow such as ridges and drainage divides.
  - Alluvial valley soils receive and temporarily store sediment, salinity, and selenium from steeper slopes. Since southerly aspects typically produce the highest rates of these constituents, disturbing alluvial valley soils receiving runoff from steep southerly aspects should be avoided if possible.
- To facilitate adequate drainage and minimize erosion from trail development, the following design feature should be considered (Report 10. Criteria for the Placement of Trails, Bureau of Land Management, Uncompahgre Field Office (in draft)).



- Use cross slope and avoid flat ground whenever possible. The trail tread should generally run perpendicular to the cross slope and should utilize frequent grade reversals. This is the best way to keep water off the trail.
- The Half Rule: “A trail’s grade shouldn’t exceed half the grade of the hillside or side slope (cross slope) that the trail traverses. If the grade does exceed half the side slope, it’s considered a fall-line trail. Water will flow down a fall-line trail rather than run across it. For example, if you’re building across a hillside with a (cross slope) of 20 percent, the trail-tread grade should not exceed 10 percent.”
- The Ten Percent Average Guideline: The average trail grade over the length of the trail should be 10 percent or less for greatest sustainability. Short sections of the trail may exceed this, but the overall grade should remain at 10 percent or less.
- Grade Reversals: Frequent changes in the direction of tread grade (gentle up and down undulations) will ensure that water is forced off the trail at frequent intervals.
- Drainage crossings are key control points and should be selected carefully. Consider both the trail’s impact on the drainage (erosion and sedimentation), and the drainage’s impact on the trail (changing tread surface, water channeling onto trail. The trail should descend into and climb out of the drainage to prevent water from flowing down the trail. Avoid long or steep entries into drainages. Design grade reversals into the trail on each side of the approach to minimize water and sediment entering from the trail. Look for drainage crossings on rock.
- A drought management plan should be prepared and implemented for recreational activities, as disturbing soils during excessively dry conditions can result in accelerated wind erosion, and long term disturbance to biological soil crust (preparer’s recommendation).

#### **Miscellaneous BMPs**

- BLM and permitted water facilities should be constructed to be impervious to prevent percolation into underlying Mancos shale. This includes ponds, ditches, canals etc. These facilities could be lined with an impervious material, piped, or possibly treated with PAM. The following are a list of criteria that should be considered for pond developments: (Report 9. Gunnison Basin Selenium Task Force)
  - Ponds that are “perched” or elevated above the water table and supplied with irrigation water or intermittent stream flow become new sources of groundwater deep percolation and selenium and salt loading.
  - Ponds which have long intermittent dry periods commonly form cracks (shrinking of the clay component) that take a long time to seal during refilling, which can accelerate the selenium and salt yield.

- Ponds that are located close to or in fractured Mancos shale have higher leakage rates and are sources of selenium and salt loading.
  - Ponds located in existing wetlands (i.e. non-perched ponds) generally do not contribute additional water to deep percolation, the groundwater system and selenium and salt loading.
  - Although non-perched ponds do not contribute to selenium loading, if they are located in Mancos shale derived soils, they likely intercept groundwater elevated in selenium and can be new sources of exposure for wildlife.
- The following is a list of Mancos shale soil characteristics, from worst to best, to consider when selecting a site for pond or other water facility construction (for Mancos shale soils receiving less than 16 inches of annual precipitation): (Report 9. Gunnison Basin Selenium Task Force)
  - Mancos shale soils that are previously non-irrigated and are residual (less than 60 inches to shale bedrock) and are perched above existing ground water tables.
  - Mancos shale soils that are previously non-irrigated and are alluvial (greater than 60 inches to shale bedrock) and are perched above existing ground water tables.
  - Mancos shale soils that are previously irrigated and are residual and are perched above the existing ground water tables.
  - Mancos shale soils that are previously irrigated that are alluvial, and are perched above existing ground water tables.
  - Ponds that are located in Mancos shale soils that are constructed within existing ground water tables.
- Note: any soils not derived from the Mancos shale but are underlain by Mancos shale in relative close proximity to the soils surface, have similar ranking potentials to selenium loading as the Mancos soils listed above.
  - All other soils not derived from or underlain by Mancos shale.
- All realty actions and permits/ROWs should be carefully reviewed for both salinity/selenium implications, and mitigate if necessary. Collaborating with the Gunnison Basin Selenium Task Force can be a means to find acceptable mitigation (preparer's recommendation).
- Continue to participate as a stakeholder in the Gunnison Basin Selenium Task Force and the Colorado River Basin, Salinity Control Forum (preparer's recommendation).
- Intensify water quality monitoring on 303(d) listed streams for selenium and present findings at the Colorado Water Quality Control Commission's triennial review. (preparer's recommendation)

## **Water**

### **Roads**

- Design roads for minimal disruption of natural drainage patterns.
- Provide energy dissipaters (e.g., rock piles and logs) where necessary at the downstream end of ditch relief culverts to reduce the erosion energy of the emerging water.
- Drainage structures should not be discharged onto erodible soils or fill slopes without outfall protection.
- Avoid using roads during wet periods if use will damage the road drainage features.
- Grade road surfaces only as often as necessary to maintain a stable running surface and to retain the original surface drainage.
- Avoid cutting the toe of cut slopes when grading roads or pulling ditches.
- Provide for erosion-resistant surface drainage by adding necessary drainage facilities and armoring prior to fall rain or snow. When erosion is anticipated, sediment barriers shall be constructed to slow runoff, allow deposition of sediment, and prevent sediment from leaving the site. In addition, straining or filtration mechanisms may also contribute to sediment removal from runoff.
- The operator shall institute measures such as surfacing, watering, and use of non-saline dust suppressants on all roads authorized in this project to minimize impacts from fugitive dust emissions. The use of chemical dust suppressants on public surface will require prior approval from the BLM Authorized Officer.
- Avoid grading sections of road that do not need maintenance, as this elevates sediment production from the newly disturbed surface. Raise the blade where grading is not needed.
- Remove berms from the outside edge of roads where runoff is channeled.
- Leave abandoned roads in a condition that provides adequate drainage without further maintenance. Close these roads to traffic, reseed and/or scarify, and, if necessary, re-contour and provide cross ditches or drain dips.

### **Oil and Gas**

- To reduce potential for contaminating water resources where spills of drilling fluids are most vulnerable (e.g., near areas of mapped alluvial, colluvial, and glacial deposits, near springs and perennial water sources, and locally/regionally important groundwater recharge areas) the operator will use:
  - Closed Loop Drilling Systems.
  - Flowback and stimulation fluids should be contained in tanks on well pad with secondary containment mats/blankets (or equivalent).
  - Containment devices should be installed beneath and around crude oil, condensate and produced water storage tanks.

- Collection of surface and ground water quality data (pre, during and post) surface disturbing activities.
  - Notification of potentially impacted Public Water Systems 15 miles downstream.
  - Emergency spill and response program shall be developed, reviewed, and approved by BLM prior to surface-disturbing activities.
  - Chemicals used in the fracturing process should be biodegradable, non-toxic neutral pH, residual free, non-corrosive, non-polluting and non-hazardous in the forms and concentrations being used. The operator should review the material safety data sheets to assure the chemicals are not known carcinogens in the methods or concentrations being used.
- Avoid mixing or loading any chemicals near a well, spring, cistern, sinkhole, or stream.
  - Place all excess material removed by maintenance operations in safe disposal sites and stabilize these sites to prevent erosion. Avoid locations where erosion will carry materials into a stream.
  - The operator should utilize surface containment mats/blankets (or comparable) to prevent contamination of water resources occurring from accidental spills or leaks of fuels, coolants, lubricants, drilling fluids, fracturing fluids, or other potentially hazardous materials commonly utilized at drill sites.
  - Evaporation ponds should not be used for disposing of produced water.
  - Water from well production tests (water wells) or hydrostatic testing of pipelines should be filtered of sediments prior to discharge into wetlands. Energy dissipating methods (e.g., straw-bails, waddles, vegetative buffers) should be in place prior to discharge of production water or water used for hydrostatic testing.
  - Surface disturbing actions including well construction for fluid mineral development and storage of condensate and/or waste products associated with mineral development should not impair existing beneficial uses for groundwater supply wells. When potential foreseeable degradation of existing beneficial uses may occur, development and storage should be relocated in appropriate locations downgradient of these intake points (e.g., well head) or not permitted.

### **Stream Crossings**

- Cross stream channels at right angles if at all possible.
- Concentrate right-of-way actions adjacent to stream courses as far landward as safety allows.
- Remove all temporary stream crossings immediately after use and cross ditch the ends of skid trails/two tracks/rights-of-way to mitigate erosion from disturbed areas.
- Evaluate potential effects of stream crossings/channel work on existing structures such as culverts, bridges, buried cables, pipelines, and irrigation flumes prior to construction activities to identify and mitigate foreseen impacts.



- Design and construct stream crossings that handle the 100-year flood, and consider culvert and bridge designs that facilitate aquatic life passage.
- Low water crossings should be constructed at original streambed elevation in a manner that prevents any blockage or restriction of the existing channel. Material removed will be stockpiled for use in reclamation of the crossings.

#### **General**

- Avoid alteration of natural hydrologic function and condition in source areas for springs, seeps, and fens. Relocate surface-disturbing activities away from these sensitive areas as site conditions warrant.
- Restore modified or damaged streams as close as practicable to natural conditions using bioengineering techniques to protect banks, and to re-establish riparian vegetation.
- Maintain to the greatest extent practicable natural flow rates and chemical and physical properties of surface and groundwater during work within stream channels, floodplains, and/or riparian areas.
- Maintain appropriate vegetative/riparian buffers around water bodies to slow runoff and trap sediments and protect water quality.

#### **References**

- BLM (US Department of the Interior, Bureau of Land Management) and US Geological Survey. 2001. Biological Soil Crusts: Ecology and Management. Technical Reference 1730-2. BLM/ID/ST-01/001+1730. BLM, Denver, CO. 118 pp.
- Murphy, D. 2011. The Status of Our Knowledge and Best Management Practices for Surface Disturbing Activities on Mancos Shale Dominated Landscapes in Western Colorado. Prepared for the BLM, Uncompahgre Field Office, Montrose, CO, by Aqua Solutions LLC, Montrose, CO. April 2011. 25pp.
- Sada, D. W., J.E. Williams, J.C. Silvey, A. Halford, J. Ramakka, P. Summers, and L. Lewis. 2001. Riparian Area Management: A Guide to Managing, Restoring, and Conserving Springs in the Western United States. Technical Reference 1737-17. BLM/ST/ST-01/001+1737. BLM, Denver, CO. 70 pp.

## **VEGETATION**

#### **General and Upland**

- Review and refine vegetation and ecological site maps and models periodically through incorporation into the Land Health Assessment process.
- Incorporate information from ecological site models into seed mixes, revegetation BMPs, and the establishment of specific performance criteria.
- Incorporate climate change influences into development of seed mixes.
- Review and update standard seed mixes periodically.

- Establish performance criteria for revegetation that restore or improve upon preexisting levels of land health.
- Review and revise coordinated monitoring plan periodically.
- Promote and protect vegetation types with high carbon sequestration levels where consistent with vegetation health and mosaic objectives.
- Limit authorized use levels and activities where needed to allow vegetation to recover from fire, drought, disease and insect outbreaks
- Incorporate strategies in grazing plans which manage fuel build up to enhance natural fire use.
- Defer vegetation disturbing activities during severe or extreme drought to allow for vegetation recovery.
- On a landscape scale, maintain a diversity of age classes. Any 100 square mile patch of pinyon-juniper should encompass the full range of seral stages. Preferentially achieve diversity by actions in younger age classes rather than reductions of older stands.
- To benefit species sensitive to habitat fragmentation, maintain unroaded stands or patches no less than 1.2 square miles in size.
- Maintain connectivity between stands of pinyon-juniper, sagebrush, and ponderosa pine by preserving corridors of similar vegetation.
- In woodland thinning or harvest, retain at least some beetle-killed pinyons, large trees (trunk diameter greater than 12 inches), trees with twisted trunks, standing dead trees (at least 2 per acre), partially dead trees (at least 2 per acre), large downed trees (at least 2 per acre), trees with cavities, and trees with significant mistletoe infestations (at least 2 per acre).
- Reclaim unused or undesired roadbeds in pinyon-juniper woodland, salt desert shrub, and ponderosa pine.
- After wildfire or intensive disturbance, priority should be in seeding with native grasses and forbs. Avoid seeding with monocultures or non-native grasses and forbs. Reseed with local genetic seed stock if available, or use non-native herbaceous species that do not compete well with native species.
- Place high requirements for justifying creation or retention of roads (or other linear features that fragment the habitat) in sagebrush. Reclaim unused or undesired roadbeds in sagebrush land cover types.
- If management prescriptions require reduction of pinyon-juniper (to control encroachment on sagebrush), focus reduction treatments where the largest patches of sagebrush would most quickly result (pinyon-juniper stands younger than 75 years on relatively deep, level soils, with sagebrush nearby).
- Prevent the loss of native understory in greasewood and other tall desert shrub.

- Post-fire rehabilitation should involve reseeding with some warm season native grasses (e.g., galleta).
- Weed management should place high priority on preventing the entrance of new flammable species such as medusahead.
- To the extent possible, move proposed land transforming projects or proposed road alignments out of large ponderosa pine tracts (greater than 150 acres).
- Retain some slash onsite for dead-and-down-wood insect habitat, if it can be justified considering forest pathologies.
- Retain and enhance ponderosa pine old growth characteristics (Reynolds et al 1992): clumpy nature, at least two large (greater than or equal to 18 inches diameter breast height, 30 feet tall) snags or large green snag per acre, at least 3 large (12 inch diameter mid-point, 8 feet long) downed logs per acre, a minimum of 3-5 mature and old live trees per acre in groups or stringers with interlocking crowns.
- Manage ponderosa pine for a mosaic of vegetation structural stages interspersed throughout (majority [60 percent] should ultimately be in the older age [i.e. greater than 12 inches diameter breast height]) with 30 percent in trees greater than 18 inches diameter breast height.

### **References**

Reynolds, R.T., R.T. Graham, M.H. Reiser, R.L. Bassett, P.L. Kennedy, D.A. Boyce Jr., G. Goodwin, R. Smith, and E.L. Fisher. 1992. Management Recommendations for the Northern Goshawk in the Southwestern United States. USDA Forest Service General Technical Report RM-217:90 pp.

### **Riparian**

- Trails and roads will be kept out of riparian areas wherever possible. Where this is not possible, impacts must be minimized by using soil stabilization structures, restoring damaged vegetation, and placing in least impacting areas. Buffer riparian and wetland areas amply from road and trail placement and other activities.
- Management actions within wetlands will include measures to restore their natural functions (as required by Executive Orders 11988 and 11990).
- Minimize livestock grazing and trailing impacts in riparian areas to protect vegetation, habitat values, streambank stability, and water quality.

### **Weeds**

- Apply only weed-free gravel/sand/road base (i.e., free of all Colorado A and B listed weed species).
- Survey proposed project area prior to ground disturbing construction or overland surveys to determine if weeds are going to need to be addressed.
- When possible, pre-treat weeds in proposed project area prior to construction.
- Keep all banked topsoil in a weed free status.

- All construction vehicles and machinery should be free of debris and weed seeds before entering BLM lands including access roads into BLM lands. If construction site has weeds/weed seed all construction machinery should be cleaned prior to leaving the construction site.
- If there are weeds in the construction area construction should occur in the area with the least amount of weeds first progressing to areas of heavier infestation.
- Only one exit route should be used from infested areas and that route clearly marked (flagged and GPS) for follow up and future treatment.
- All ground disturbing activities will incorporate Early Detection Rapid Response strategies to address weeds before they become established.
- All special recreation events should have a weed education/mitigation component.
- Company vehicles entering and leaving projects should always be repower washed if vehicle visited another site that has weeds.
- All long term projects will have a noxious weed monitoring and treatment plan before construction of the project.
- Check and clean tires and skid pans for noxious weed debris.
- Check companion animals before and after using public lands clean appropriately.
- Avoid staging in weed areas.
- Use weed free hay and straw as directed by policy.
- Seed all areas around a project that has had ground disturbance to reduce the spread of noxious weeds and create a favorable environment for native vegetation.
- Patches of weeds on roads should be skipped over to reduce the threat of weeds spreading down the road. The patch should be treated before road maintenance begins.
- Monitor for noxious weed establishment after projects are finished and for at least two growing seasons post project.
- Don't pick the wildflowers.
- Educate yourself and employees on noxious weed identification.

#### **WILDLIFE (INCLUDING SPECIAL STATUS SPECIES)**

- Expiration dates and other conditions will be applied to all biological clearances (e.g., raptor territory activity surveys expire April 1 of the following year).
- Require operators to establish and submit to the BLM UFO a set of operating procedures for employees and contractors working in important wildlife habitats. Design such procedures to inform employees and contractors of ways to minimize the effect of their presence on fish and wildlife and habitats. Procedures may address items such as working in bear country, controlling dogs, human waste disposal, and understanding and abiding by hunting, fishing, and firearms regulations.
- Surveys will be conducted by qualified biologists approved by the BLM UFO.



- Surveys will be conducted during the appropriate time period(s) for the species of interest and will typically be conducted as close in time as possible prior to surface disturbance.
- Survey reports, data, and determinations shall be submitted to the BLM UFO for review and confirmation.
- The BLM Authorized Officer will apply mitigation measures as appropriate, commensurate with anticipated impacts.

## **WILDLIFE**

### **Aquatic**

- Management techniques will be used to minimize degradation of aquatic habitats. Bridges and culvert installations will be designed to maintain adequate passages for fish.
- Bridges, low-water crossings, culverts, diversions, and other man-made structures in or adjacent to, aquatic habitats will be designed such that they provide for fish movement commensurate with management objectives. These structures should not impede movement of fish or, where appropriate, should create barriers to movement of nonnative fish, depending on management objectives. Additionally, they will be constructed and designed to minimize or eliminate sediment loading, erosion, and other processes that could degrade habitats, particularly in cold-water fisheries. Where possible, modify existing bridges, culverts, and similar structures to provide for movement of native fish or create barriers to nonnative fish movement commensurate with management objectives.
- All equipment and water craft utilized for working or transportation in aquatic systems shall be cleaned and inspected by the BLM Authorized Officer prior to conducting permitted activities, to prevent the introduction of invasive aquatic species.

### **Terrestrial**

- Where winter range areas are not protected by lease stipulations, operations such as construction, drilling, completion, work-overs and other intensive activities will be avoided from January 1 to March 1 to minimize impacts to wintering big game.
- In all habitat improvements and manipulations, and maintenance of those areas, including projects designed to improve livestock grazing, reduce fuel loading, or otherwise, consider the habitat requirements of native wildlife communities, game and non-game alike, and acknowledge the ecological tradeoffs.
- During severe or extreme drought years, to the extent possible, assure that some pastures retain the maximum herb cover (even standing dead material) possible for ground-nesting birds.

### ***Migratory Birds***

- To protect areas from anthropogenic fires (e.g., campfire or fireworks accidents), periodically move large woody downfall away from trees near popular campsites and tree stands along railroad tracks.
- Investigate the economic value for the waterfowl, waterbirds, shorebirds and land birds that would use stock ponds and reservoirs if their dams were restored, such as Roatcap Reservoir, west of Olathe. This may help to create a positive cost-benefit ratio for the pond restoration.
- Buffer riparian and wetland areas amply from road and trail placement and other activities.
- Give high priority to removal of tamarisk and other noxious weeds under native riparian trees.
- Consider planting riparian plant fire breaks (i.e. alkali sacaton) in high recreation use areas or near other likely sources of ignition.
- Use current state-of-the art practices to preserve high-quality or selected willow stands from intensive ungulate pressure (exclosures, seasonal closures, game regulations etc.).
- Implement fuels treatments to protect riparian areas from anthropogenic fires (e.g., campfire or fireworks accidents), periodically move large woody downfall away from trees near popular campsites and tree stands along railroad tracks.
- For the benefit of riparian shrub-dependent bird species, place at lowest priority eradication of tamarisk stands with the largest basal stems (bird nesting habitat) while there are younger tamarisk stands to treat.
- In areas of riparian weed treatment, replace removed tamarisk with native shrubs such as three-leaf sumac, golden currant, and silver buffaloberry. Also consider planting small native trees such as box elder and Goodding's or peachleaf willows. If needed, seed with native herbaceous ground cover.
- Before implementing a tamarisk removal project, survey for long-eared owls during breeding and winter roosting seasons. If use by long-eared owls is detected, delay treatment until suitable native tall shrubs nearby can replace the habitat.
- To help control user-proliferated vehicle routes, combine directional signage with wildlife message signing, giving users added incentive to protect their lands.
- All power transmission equipment will incorporate the best known practices to prevent avian electrocutions (Avian Power Line Interaction Committee 2006).
- Encourage buried electric transmission lines over pole and tower held lines through non-wooded and non-forested habitat.
- All new construction of communication towers, wind turbines, or similar aerial hazards, will incorporate the best known practices for approving sites and designs to minimize hazards to migratory birds (Lambeth and Reeder 2009).

### **References**

- Lambeth, R.E. and D.R. Reeder. 2009. Migratory Bird Status Literature Review. Prepared by Rare Earth Science, LLC, for the BLM, Uncompahgre Field Office, Montrose, CO. 198 p.
- Avian Power Line Interaction Committee. 2006. Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 1996. Edison Electric Institute, Avian Power Line Interaction Committee, and the California Energy Commission. Washington, DC, and Sacramento, CA.

## **SPECIAL STATUS SPECIES**

### **General**

- The operator is required to conduct a biological inventory prior to approval of operations in areas of known or suspected habitat of special status species, or habitat of other species of interest such as, but not limited to, raptor nests, sage-grouse leks, or rare plant communities. Surveys shall be conducted by qualified biologist(s) using protocols established for potentially affected species during the appropriate time period(s) for the species. Survey reports, data, and determinations shall be submitted to the BLM for review and confirmation. Results from surveys expire three (3) years from the date of survey completion. Operators, the BLM, and the BLM Authorized Officer will use the information gathered to develop an appropriate mitigation plan. Mitigating measures may include, but are not limited to, relocation of development activities and fencing operations or habitat. If special status species not found during inventory are encountered during operation, operations will cease immediately, and the BLM Authorized Officer will be notified.
- When “no effect” determinations (resulting from Endangered Species Act, Section 7 consultation with USFWS) rely heavily on specific project design features or mitigation to guarantee “no effect” on federally protected species, a qualified on-site construction monitor will be present during project implementation.
- Require oil and gas operators and other proponents of surface-disturbing activities to implement specific measures to reduce impacts of operations on wildlife and fish habitats within high-value or crucial habitats. Measures would be determined through biological surveys, onsite inspections, effects of previous actions in the area, and BMPs.
- Require operators to establish and submit to the BLM UFO a set of operating procedures for employees and contractors working in important wildlife habitats.
- Surveys will be conducted by qualified biologists approved by the BLM UFO during the appropriate time period(s) for the species of interest and will typically be conducted as close in time as possible prior to surface disturbance.
- Survey reports, data, and determinations shall be submitted to the BLM UFO for review and confirmation.

### **Plants**

- Apply the Recommended Best Management Practices for Plants of Concern (Elliott et al. 2011) to minimize land use impacts on federally protected and recognized plants.
- Appropriate sediment and erosion control, weed control, and similar practices will be applied as necessary to protect plant populations.

### **Aquatic**

- Identify in-channel features (e.g., culverts, water diversion structures) that block aquatic organism movement and/or impair stream connectivity and replace, modify, or remove these impediments as they are identified and as opportunities allow. Consider and address aquatic organism passage and appropriate life-stage requirements when designing new or modifying existing stream crossings.
- Where construction of in-channel barriers will benefit aquatic species by limiting access from competitive species and/or disease vectors, consider barriers as a management tool on a site-specific basis.

### **Terrestrial**

- Follow the vegetation structure guidelines in Appendix H of the Gunnison Sage-grouse Rangewide Conservation Plan (Gunnison Sage-grouse Rangewide Steering Committee 2005) to achieve good habitat potential near and in mapped grouse range.
- For the benefit of sagebrush-dependent passerine birds, avoid sagebrush eradication and treatment projects that reduce sagebrush canopy cover in a patch to below 20 percent on average.
- If management prescriptions require thinning of sagebrush canopy, protect several of the taller shrubs in each stand, and protect native herbaceous understories by selective removal of shrubs (rather than wholesale removal). Minimize ground disturbance, justifying it only to facilitate planted seed contact with soil.
- Using habitat guidelines in the Gunnison Sage-grouse Rangewide Conservation Plan (Gunnison Sage-grouse Rangewide Steering Committee 2005), inventory sagebrush habitat characteristics and quality across the Uncompahgre RMP planning area (to develop a baseline for future comparison). Identify the best examples of intact contiguous patches with native understory vegetation, and prioritize such patches for protection from weed encroachment and fragmentation.
- On the landscape scale, prioritize protection of large (greater than 150 acres) intact patches of sagebrush from fragmentation, conversion to other land cover types, wildfire, herbaceous non-native weed invasion and pinyon-juniper woodland encroachment. First priority should be given to sagebrush in mapped sage sparrow range, and within and adjacent to mapped Gunnison sage-grouse range.
- In lynx habitat, remote monitoring systems shall be established as feasible for developed sites that occur within these habitat types or which require travel through these habitat types for access. This stipulation applies to both BLM surface



and subsurface mineral estate. Locked gates will be installed at proper locations to prevent public use. The BLM will work with operators to modify existing operations for remote monitoring, to the degree possible.

- Gate and close to public use roads built for mineral activities in lynx habitat within lynx analysis units.
- Upon project completion, reclaim or obliterate these roads and monitor for successful restoration and weed control. Locked gates or other effective barricades will remain in place until restoration is achieved.
- Apply project design criteria as feasible to protect Gunnison sage-grouse nesting and early brood rearing activities by requiring that hospital grade sound reducing mufflers, exhaust systems, multi-cylinder pumps, and other noise-reducing technologies be used during the breeding period (March 1 to May 15) within 4 miles of active leks, or within sage-grouse nesting and early brood-rearing habitat as mapped.
- Where bat roosting, maternity sites and winter hibernacula occur, bat gates would be required for closing abandoned mine lands.

### **References**

Gunnison Sage-grouse Rangewide Steering Committee. 2005. Gunnison sage-grouse rangewide conservation plan. Colorado Department of Natural Resources, Parks and Wildlife (formerly Colorado Division of Wildlife), Denver, CO.

Elliott, B. A., B. Kurzel, and S. Spackman Panjabi. 2011. Recommended Best Management Practices for Plants of Concern. Practices developed to reduce the impacts of oil and gas development activities to plants of concern. Unpublished report prepared by the Rare Plant Conservation Initiative for the National Fish and Wildlife Foundation. 20 p.

## **WILDLAND FIRE MANAGEMENT**

- Rehabilitate suppression impacts as soon after fire containment as possible (such as water barring, removing berms, seeding disturbed areas, placing debris on lines).

### **Fuels Management**

- Provide fire prevention and mitigation outreach information and education to communities within the UFO as needed.

### **Fire Suppression**

- Resource Advisors and other applicable specialists shall be utilized to advise the Incident Commander and suppression resources on the natural resource values during the suppression effort.
- Avoid applying fire retardant in or near drinking water sources.
- Avoid the application of retardant or foam within 300 feet of a waterway or stream channel. Deviations from this procedure are acceptable if life or property is threatened.

- Fire lines will not be constructed by heavy equipment within riparian stream zones. If construction is necessary due to threats to life or property, control lines shall terminate at the edge of the riparian zone at a location determined appropriate to meet fire suppression objectives based on fire behavior, vegetation/fuel types, and fire fighter safety. Constructed lines shall be reclaimed so use does not continue on the route in the future.
- For streams currently occupied by Greenback Cutthroat Trout, Colorado River Cutthroat Trout or other aquatic special status species, extractions of water from ponds or pools shall not be allowed if stream inflow is minimal and extraction of water will lower the existing pond or pool level.
- Lands will be temporarily closed to other uses in areas where fire suppression is being implemented.
- Stream flow shall not be impounded or diverted by mechanical means in order to facilitate extraction of water from the stream for fire suppression efforts.
- If it is determined that use of retardant or surfactant foam within 300 feet of a waterway or stream channel is appropriate due to threats to life or property; alternative line construction tactics are not feasible because of terrain constraints, congested areas, or lack of ground personnel; or potential damage to natural resources outweighs possible loss of aquatic life, the unit administrator shall determine whether there have been any adverse effects to federally listed species. If the action agency determines that adverse effects were incurred by federally listed species or their habitats, then the action agency must consult with the Service, as required by 50 CFR 402.05, as soon as practicable.
- Avoid whenever possible burning out unburned islands of native vegetation, specifically sagebrush communities.
- Minimize/mitigate impacts to cultural resources and pristine vegetative communities.
- Before using it on lands administered by the UFO, thoroughly rinse to remove mud and debris from all fire suppression equipment from off-district or out of state and used to extract water from lakes, ponds, streams, or spring sources. Examples of this equipment are helicopter buckets, draft hoses, and screens. After cleaning the equipment, disinfect it to prevent the spread of invasive aquatic species. Do not rinse equipment with disinfectant solutions within 100 feet of natural water sources. UFO suppression equipment used to extract water from sources known to be contaminated with invasive aquatic species, as identified by the US Fish and Wildlife Service and Colorado Parks and Wildlife, also shall be disinfected beforehand on lands administered by the UFO.
- Vehicle and equipment shall be washed before being assigned to fires to minimize the spread of noxious weeds. Especially out of area equipment. Larger fires with incident management teams assigned may need to have a weed wash station.

### **Emergency Stabilization and Rehabilitation**

- Stabilize areas that have low potential to naturally revegetate and that have high wind and soil erosion potential. Treatments include the following:

- Seeding and planting to provide vegetative cover;
- Spreading mulch to protect bare soil and discourage runoff;
- Repairing damaged roads and drainage facilities;
- Clearing stream channels of structures or debris that is deposited by suppression activities;
- Installation of erosion control structures;
- Installation of channel stabilization structures;
- Fence or restrict areas to livestock and wild horse and burro grazing to promote success of natural revegetation or establishment of seeded species;
- Lands may be temporarily closed to other uses during emergency stabilization and rehabilitation practices if activities inhibit treatment;
- Repair or replace range improvements and facilities; and
- Monitor emergency stabilization and rehabilitation treatments.

## **CULTURAL RESOURCES**

### **Standard Operating Procedures**

- The holder of a BLM authorization to carry out land use activities on Federal lands, including all leases and permits, must notify the BLM, by telephone and written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony (43 Code of Federal Regulations [CFR] 10.4(g)). Activities must stop in the immediate vicinity of the discovery. The discovery must be protected from the authorized activity for a period of 30 days or unless otherwise notified by the (43 CFR 10.4(c) and (d)).
- The National Historic Preservation Act, as amended, requires that if newly discovered historic or archaeological materials or other cultural resources are identified during project implementation, work in that area must stop and the BLM Authorized Officer must be notified immediately. Within five working days the BLM Authorized Officer will inform the proponent as to:
- Whether the materials appear eligible for the National Register of Historic Places;
- The mitigation measures the proponent will likely have to undertake before the site could be used (assuming in situ preservation is not practicable), (36 CFR 800.13); and
- A timeframe for the BLM Authorized Officer to complete an expedited review under 36 CFR 800.11 to confirm, through the State Historic Preservation Office, that the BLM Authorized Officer's findings were correct and mitigation was appropriate.
- A standard Education/Discovery stipulation for cultural resource protection shall be attached to the land use authorization. The operator or its contractor is responsible for informing all persons who are associated with the project operations that

Federal laws protect cultural resources and they will be subject to prosecution for disturbing or destroying any historic or archaeological sites, or collecting any cultural objects, prehistoric or historic from federal lands.

- Strict adherence to the confidentiality of information concerning the nature and location of archeological resources will be required of any company issued a land use authorization and all of their subcontractors (Section 304 of the National Historic Preservation Act, 16 US Code 470w-3(a)).

### **Best Management Practices**

- BLM specialists shall complete a File Search Request form and submit to the Field Office Archaeologist as soon as there is proposed BLM activity or BLM authorized activity that will require preparation of a NEPA document. This will provide the specialist with immediate information as to the need for Class III inventory, whether that will be contracted or in-house, or the presence of Cultural Resources that may preclude or impede their project.
- Once it has been determined that a project will require contracted cultural inventory the BLM specialists shall complete a Request for CR Compliance form and submit to the Field Office Archaeologist as soon as they have a final design for a BLM proposed project or activity.
- Evaluation of all BLM activities and BLM authorized activities shall be made in compliance with BLM Manual 8100, The Foundations for Managing Cultural Resources (BLM 2004a), and subsequent 8100 series (BLM 2004b, 2004c, 2004d, 2004e, 2004f, 2004g, and 2004h); Handbook of Guidelines and Procedures for Inventory, Evaluation, and Mitigation of Cultural Resources (BLM 1998, rev. 2011); and the current State Protocol Agreement between the Colorado BLM and the Colorado State Historic Preservation Office.
- In complex linear or split-estate actions early coordination with private landowners will facilitate the process the BLM must complete prior to authorizing the action. To comply with the National Historic Preservation Act, the BLM must consider the effects to cultural resources on private land that result from a Federal action, such as linear rights-of-way or constructing a well pad on private land to drill to federal lease. Before an applicant can contract a cultural survey, the private surface owner must allow the cultural consultant access. Projects can be authorized without completing cultural surveys on private lands but this may lead to lengthy delays while the BLM completes consultation.
- When possible, locate projects in areas that are previously disturbed. To comply with the National Historic Preservation Act the BLM must identify significant cultural resources. Under the current regulations and guidelines the BLM may decide that no inventory needs to be conducted because the proposed action is located in an environment where ground disturbance has modified the surface so extensively that the likelihood of finding intact cultural resources is negligible.
- When a NEPA document specifically stipulates the need for an archaeological monitor during construction or a project is located in areas that require an



archaeological monitor to be present it is the applicant's responsibility to contract an archaeological consultant holding a current Colorado BLM permit and authorized to work in the UFO. Fieldwork authorizations are required prior to any construction monitoring.

- Where proposed projects or development will adversely affect a cultural resource, testing, data recovery or full excavation to recover scientific information may be required as mitigation. The applicant or operator bears the full cost of mitigation and is encouraged to consider avoiding adverse effects through project relocation or redesign rather than mitigating adverse effects.
- A cultural resource must be allocated to public use prior to:
  - authorizing or implementing any Heritage Tourism project;
  - when Special Recreation Permits are issued that will use a cultural resource; or
  - a BLM recreation project is proposed that involves the use or interpretation of a cultural resource.
- A File Search Request form must be submitted to the Field Office Archaeologist identifying the site and the proposed use so the allocation to public use can be confirmed.

### **References**

- BLM (United States Department of the Interior, Bureau of Land Management). 1998. Handbook of Guidelines and Procedures for Inventory, Evaluation, and Mitigation of Cultural Resources. Rev. 2011. BLM, Colorado State Office, Lakewood, CO. 37 p.
- \_\_\_\_\_. 2004a. Manual 8100: The Foundations for Managing Cultural Resources. Release 8-72. BLM, Washington, DC. December 3, 2004.
- \_\_\_\_\_. 2004b. Manual 8110: Identifying and Evaluating Cultural Resources. 8-73. BLM, Washington, DC. December 3, 2004.
- \_\_\_\_\_. 2004c. Manual 8120: Tribal Consultation Under Cultural Resources. 8-74. BLM, Washington, DC. December 3, 2004.
- \_\_\_\_\_. 2004d. Manual 8120-1: General Procedural Guidance for Native American Consultation. 8-75. BLM, Washington, DC. December 3, 2004.
- \_\_\_\_\_. 2004e. Manual 8130: Planning for Uses of Cultural Resources. 8-76. BLM, Washington, DC. December 3, 2004.
- \_\_\_\_\_. 2004f. Manual 8140: Protecting Cultural Resources. 8-77. BLM, Washington, DC. December 3, 2004.
- \_\_\_\_\_. 2004g. Manual 8150: Permitting Uses of Cultural Resources. 8-78. BLM, Washington, DC. December 3, 2004.

\_\_\_\_\_. 2004h. Manual 8170: Interpreting Cultural Resources for the Public. 8-79. BLM, Washington, DC. December 3, 2004.

## **TRIBAL CONSULTATION**

### **Standard Operating Procedures**

- The BLM has a responsibility to develop a government-to-government relationship with the tribes: the formal relationship that exists between the Federal Government and tribal governments under United State laws. Tribal governments are considered dependent domestic sovereignties with primary and independent jurisdiction (in most cases) over tribal lands. Concerning proposed BLM plans and actions, at least the level of consideration and consistency review provided to State governments must be afforded to tribal governments.
- The BLM is responsible for consultation under General Authorities defined as “laws, executive orders, and regulations that are not considered “cultural resource authorities”. The regulations implementing both Federal Land Policy and Management Act and NEPA require Native American consultation. The American Indian Religious Freedom Act and the Indian Sacred sites order (Executive Order 13007) pertain to the free exercise clause of the First Amendment (BLM Manual 8120-1 Guidelines for Conducting Tribal Consultation [BLM 2004], Federal Land Policy and Management Act Title II, NEPA Section 102, 40 CFR 1501.2 and 1501.7)
- Tribes must be consulted whenever other governmental entities or the public are formally involved in the BLM’s environmental review process in any NEPA documentation that entails public involvement or initial discussions with local or state governments (BLM Handbook H-1790-1, National Environmental Policy Act [BLM 2008]).
- NHPA Section 106 consultations for cultural resources that are significant to Indian tribes. Consultation with an Indian tribe must recognize the government-to-government relationship between the Federal Government and Indian tribes. The agency official shall consult with representatives designated or identified by the tribal government. Consultation shall be conducted in a manner sensitive to the concerns and needs of the Indian tribe. (36 CFR 800.2(c)(2)(ii)(C).

### **Best Management Practices**

- Notification is conducted by simple one-way written means. Consultation is generally construed to mean direct, two-way communication.
- When publishing notices or open letters to the public indicating that the BLM is contemplating an action and that comments are welcome, managers shall send individual letters, certified mail or delivery confirmed to tribes requesting their input on actions being considered. If this is an opening dialogue, prior to having developed a strong working relationship with the tribe, if a timely response is not received the manager shall follow up with personal telephone calls.

- For the benefit of both parties, managers are encouraged to strive for the most efficient and effective method of consultation. Whatever method is chosen, all consultation activities shall be carefully documented in the official record.
- Consultation roles can be facilitated but may not be transferred to others. Cultural resource consulting firms working for land use applicants cannot negotiate, make commitments, or otherwise give the appearance of exercising the BLM's authority in consultations.
- Owing to their status as self-governing entities, tribes shall be notified and invited to participate at least as soon as (if not earlier than) the Governor, state agencies, local governments, and other federal agencies.
- Tribal consultation means dialogue between a BLM manager and an American Indian Tribe. The BLM managers are encouraged to visit tribal councils and appropriate tribal leaders on a recurring basis. This face-to-face meeting helps to develop relationships that can reduce the time and effort spent in later consultation or individual projects. This government-to-government consultation shall be treated with appropriate respect and dignity of position.

### **References**

- BLM (United States Department of the Interior, Bureau of Land Management). 2004c. Manual 8120: Tribal Consultation under Cultural Resources. 8-74. BLM, Washington, DC. December 3, 2004.
- \_\_\_\_\_. 2004d. Manual 8120-1: General Procedural Guidance for Native American Consultation. 8-75. BLM, Washington, DC. December 3, 2004.
- \_\_\_\_\_. 2008. Handbook H-1790-1: National Environmental Policy Act Handbook. Rel. 1-1710, January 30, 2008. BLM, Washington, DC.

### **PALEONTOLOGICAL RESOURCES**

- Attach lease notices, stipulations, and other requirements to permitted activities to prevent damage to paleontological resources.

### **VISUAL RESOURCES**

- Guidelines for surface disturbing activities and facilities:
  - Natural or artificial features such as topography, vegetation, or an artificial berm would be used to help screen facilities.
  - Facilities would avoid being placed on ridge tops.
  - Structures would be painted a color that enables the facilities to blend with the natural background color of the landscape.
  - The selected color would be one or two shades darker than the dominant background color and be a semi-gloss paint to resist weathering and staining.

- Construction of new roads and other linear facilities would be located and constructed to follow the contour of the landform or mimic lines in the vegetation. (Avoid straight roads and steep slopes).
  - The minimum width of road necessary would be constructed or upgraded.
  - Short-term reclamation would include partially reshaping and re-vegetating roads, and facilities to reduce the amount of bare ground created during construction and project activities.
  - During reclamation, roads would be re-contoured back to their original contour and rough texture so to match the “texture” of the surrounding landscape.
- Developments in the immediate foreground of key observation points in VRM Class I and II areas would require special consideration to meet both recreational and VRM objectives. These facilities often create more contrast than would be acceptable; however this contrast would be allowed if the facilities are part of the expected image of the public being served. The contrast should be allowed only to the extent needed for the function of the facility, which should reflect design excellence and be a positive element of the built environment. Structures should blend into the landscape while retaining functionality.
- Night lighting and dark sky preservation considerations:
  - Light facilities only during actual hours of operation.
  - Limit night lighting to only those areas within the complex that nighttime work is occurring.
  - Consider the opportunity for zone lighting within a complex where sections are lit independently based on outdoor night operations.
  - All lighting fixtures shall be full cut-off luminaires.
  - Pedestrian scale lighting should be accomplished using bollard style path lighting using full cut-off luminaires.
  - Use of trailer-mounted mobile light plants is another way of avoiding unnecessary night lighting. The trailer-mounted mobile light plants are then used only during periods of actual need.
  - Actuate lighting by motion detection, remote control and other creative means so that light illuminate within the exterior areas only during periods when people are present.
  - Entrances into facilities should not be lit continuously through the dark sky hours, but only when vehicles approach and during normal operating hours.
  - Secure facilities using other technologies other than simply illuminating the area or perimeter of a given facility.



- When illuminating vertical features that rise over 200 feet necessitating FAA regulated air flight safety requirements, require use of On-demand Audio/ Visual Warning Systems as approved by FAA.

## **FORESTRY**

### **Standard Operating Procedures**

- No fuel wood cutting of live trees will be allowed for cottonwood, willow, alder; unless resource objectives allow otherwise.

### **Standard Design Practices for Forestry Projects**

- The closure of new roads will be considered and planned for during sale preparation in accordance with existing policy.
- Clear cuts will be considered for use in the pinyon-juniper and aspen types in critical big game winter ranges and other areas where economically feasible.
- Clear cuts will be considered for use in restoring aspen sites.
- Cuts will maximize the length of edge per amount of area considering natural and manmade boundaries.
- Sale areas with less than 15 percent ground cover or with insufficient understory will be seeded using a mixture of native grasses, forbs, and/or shrubs appropriate for the ecological site.
- Harvest plans will be completed on all commercial sales within woodlands and forests, showing access roads, decks and skid trail locations. Approval of these plans by the BLM Authorized Officer is required before harvest can start.
- A minimum 50 foot buffer will be maintained along all riparian areas.
- Snags with existing cavities or nests will be priority for retention.

### **Best Management Practices**

- Avoid heavy equipment use in riparian stands. If heavy equipment use is necessary, allow on a case by case basis and mitigate for adverse impacts.
- Protect seed and important wildlife habitat trees in pinyon-juniper stands.
- Minimize disturbance to the soil such that surface runoff does not result in sediment transport into waterbodies. Concentrate skidding on as few skid trails as needed.
- Limit primary skid trails to 10 percent of the total working area.
- Avoid widespread or random skidding patterns with repeated passes.
- Minimize placement and use of skid trails in ephemeral drainages. If skid trails must be within or cross an ephemeral drainage, additional BMPs are needed to protect water quality.
- Create skid trails only as wide as necessary to safely operate equipment and conduct the forestry operation. Avoid creating two-lane skid trails. Minimize the

extent of gouges or trenches upon the ground surface that are created by the skidding of trees or logs.

- On sloping terrain, skid trails shall follow along the land contours and shall be kept to 25 percent grade or less when practical.
- Establish decks at locations where soil disturbance is minimized.
- Maintain as close to normal (pre-construction) streamflow by maintaining depth, width, gradient and capacity of the stream channel at the crossing.
- Perform construction, installation, and removal work during low-water flow if circumstances allow.
- Stabilize the approach ways and/or stream crossing locations so sediment is not transported into the stream.
- The crossing can be installed at a right-angle (90 degrees) to the stream channel so crossing distance is minimized.
- Any trees removed during these processes will be purchased by the applicant prior to commencement of operations.
- Weed management (inventory and treatment) will occur for a minimum of three years post-harvest.

#### **Guidelines for Christmas Tree and Firewood Harvesting**

- Vehicle use is restricted to existing roads and trails.
- Do not damage adjacent trees.
- When cutting down standing trees, cut the stump 6 inches or less, or as close to the ground as possible.
- Do not top a larger tree to obtain a Christmas tree. The tree may be cut at the base 2 and then topped.
- No harvesting when soils are saturated to a depth of 3 inches to prevent damage to roads.
- UFO closed to firewood harvesting December 1 to May 1.

#### **LIVESTOCK GRAZING**

- Implement BLM Colorado Guidelines for Livestock Grazing Management (BLM 1997) (**Appendix C**, BLM Standards for Public Land Health and Guidelines for Livestock Grazing Management in Colorado). Guidelines are the management tools, methods, strategies and techniques (e.g., best management practices) designed to maintain or achieve healthy public lands as defined by the BLM Colorado Land Health Standards.
- Utilize “Recommendations on best management practices for domestic sheep grazing on public land ranges shared with bighorn sheep” (Committee of Wildlife Diseases and Committee on Sheep and Goats 2009).

- To manage brown-headed cowbird parasitism, limit spring and early summer grazing to a maximum of 15 days per use area or pasture.
- Look for opportunities for periodic rest in pastures and use areas during the nesting season (roughly April through July) to protect native cool season understory grasses, protect ground nests, and to reduce nest parasitism by cowbirds.
- Grazing will be limited to 15 days or less in each pasture or use area during the growing season to prevent grazing of plant re-growth. This limitation may be modified as determined by the BLM Authorized Officer to accommodate dormant season grazing or the use of other grazing strategies as long as forage health does not decline.
- Grazing will be deferred on new vegetation treatments and rehabilitated burned areas to the extent necessary to comply with BLM Colorado Standards for Public Land Health and Guidelines for Livestock Grazing Management (BLM 1997).
- Seasonal utilization levels on palatable forage species should not exceed 50 percent unless required to meet specific range management objectives as identified in an allotment management plan or other activity plan.
- During any time of the year, livestock use shall not exceed an average of 30 percent on native woody vegetation in riparian areas unless required to meet specific range or riparian management objectives as identified in an allotment management plan or other activity plan.
- Implement rotational grazing strategies, which would rotate spring and fall grazing use between pastures or use areas to ensure pastures are not used during the same time period in any two consecutive years. Exceptions could be made to accommodate grazing deferments associated with fire stabilization and rehabilitation or vegetation treatments.
- Grazing will be managed in a way that does not encourage the establishment or spread of weeds or other invasive plants and does not conflict with efforts to treat such weeds and invasive plants. If herbicide treatment is going to be applied by the permittee, regulations and requirements of BLM will be followed.
- The placement of livestock nutritional supplements should be designed to improve livestock distribution and reduce impacts to cultural and natural resource values. Supplements must be at least 0.25-mile (or as far as practical) from permanent water sources.
- Develop rotational grazing strategies, incorporating rest, deferment, and/or other grazing methods to improve rangeland health. All developed strategies that are not during dormant periods should ensure livestock grazing does not occur in the same location during the same time period in any two consecutive years.

### **References**

BLM (US Department of the Interior, Bureau of Land Management). 1997. BLM Standards for Public Land Health and Guidelines for Livestock Grazing Management in Colorado. BLM, Colorado State Office, Lakewood, Colorado. February 3, 1997.

US Animal Health Association Joint Working Group (US Animal Health Association, Committee on Wildlife Diseases and Committee on Sheep and Goats). 2009. Recommendations on best management practices for domestic sheep grazing on public land ranges shared with bighorn sheep. October 2009.

### **RECREATION AND VISITOR SERVICES**

- Special recreation permits will contain noxious weed management stipulations (e.g., pre-event inventories to avoid infested areas, event management to avoid or isolate activities that could cause weed introduction or spread, monitoring and treatment of infestations exacerbated by the activity, and other appropriate noxious weed management stipulations).
- Lands may be temporarily closed to other uses during recreation events performed under special recreation permit (e.g., equestrian endurance rides or motorcycle events).

### **COMPREHENSIVE TRAILS AND TRAVEL MANAGEMENT**

- Roads and trails (off-highway vehicle, horse, bicycle, and hiking) will avoid wetlands, and if avoidance is not possible will be designed and constructed in accordance with current best practices approved by the BLM (e.g., Technical Reference 2E22A68-NPS, Managing Off-highway Vehicle Trails in Wet, Unstable, and Sensitive Environments [Forest Service 2002]), or other related references.

### **References**

Meyer, K.G. 2002. Managing Degraded Off-highway Vehicle Trails in Wet, Unstable, and Sensitive Environments. Technical Reference 2E22A68-NPS OHV Management. US Department of Agriculture, Forest Service, Technology and Development Program, Missoula, MT. October 2002. 56pp.

### **LANDS AND REALTY**

Stipulations used in addition to ROW Guide Stipulations, as applicable, by UFO:

- For renewals of existing authorizations: The holder shall contact the BLM Authorized Officer at least two weeks prior to the anticipated start of any surface disturbing activities. It is the holder's responsibility to comply with all applicable Federal, State, and local laws and regulations existing or hereafter enacted or promulgated. In any event, prior to any surface disturbing activities, the holder shall comply and demonstrate compliance in writing, i.e., with surveys and inventories completed by qualified individuals, with the following laws including, but not limited to, the Endangered Species Act (if potential habitat is determined to be present), the National Historic Preservation Act, and the Native American Graves Protection and Repatriation Act. Evaluations and inventories can be completed by BLM, or by the holder in order to meet the holder's schedule and subject to approval by the BLM Authorized Officer. The holder shall not initiate any surface disturbing activities on the right-of-way without prior written approval as determined necessary by the BLM Authorized Officer. Contact the BLM Realty Specialist at (970) 240-5xxx, or alternate BLM Environmental Protection Specialist, at (970) 240-5xxx.



- For Communication Sites: To avoid possible impacts to birds or bats, follow the most current version of the US Fish and Wildlife Service's Interim Guidelines on the Siting, Construction, Operation and Decommissioning of Communication Towers, available at the following Web site:  
<http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.
- For Powerlines: Unless otherwise agreed to by the BLM Authorized Officer in writing, powerlines shall be constructed in accordance to standards outlined in "Suggested Practices for Avian Protection on Powerlines: The State of the Art in 2006" (Avian Power Line Interaction Committee 2006) available at:  
[http://www.aplic.org/SuggestedPractices2006\(LR-2watermark\).pdf](http://www.aplic.org/SuggestedPractices2006(LR-2watermark).pdf)). The holder shall assume the burden and expense of proving that pole designs not shown in the above publication are "eagle and raptor safe." Such proof shall be provided by a raptor expert approved by the BLM Authorized Officer. The BLM reserves the right to require modifications or additions to all powerline structures placed on this right-of-way, should they be necessary to ensure the safety of large perching birds. Such modifications and/or additions shall be made by the holder without liability or expense to the United States. All pole replacements will be brought up to this standard. For all maintenance activities that involve, but are not limited to, nest relocation or destruction, temporary possession, depredation, salvage/disposal, harassment, and scientific collection of raptors, the right-of-way holder shall provide the BLM with a copy of their current Migratory Bird Permit for those activities.
- For Water Wells:
  - If the holder has obtained well permits or groundwater rights pursuant to state water law procedures, those permits and/or rights will be abandoned or conveyed to the BLM Authorized Officer upon relinquishment or termination of this right-of-way grant.
  - The holder shall indemnify and hold the United States harmless from any and all liability or damages resulting from or otherwise related to human consumption of the water from the well authorized by this right-of-way grant.
- For Road Associations: The Holder shall participate in the formation of a users group association for the road. All new users would be required to join the association. The association's main purpose would be to ensure that all users would share in any proportionate costs and responsibilities including, but not limited to, road maintenance required under the terms, conditions and stipulations of the right-of-way grant. The Holder shall participate in and cooperate with the development of a road maintenance agreement within the scope of the road users group association. The agreement shall be included in the association's charter or by-laws. A copy of the association's charter or by-laws shall be submitted to the BLM Authorized Officer.

**References**

Avian Power Line Interaction Committee. 2006. Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 1996. Edison Electric Institute, Avian Power Line Interaction Committee, and the California Energy Commission. Washington, DC, and Sacramento, CA.

**FLUID MINERALS**

BMPs are adaptive state-of-the-art mitigation measures applied on a site-specific basis to reduce, prevent, or avoid adverse environmental or social impacts. Numerous BMPs for oil and gas development are also incorporated into the general oil and gas development requirements. These include minimizing the number and size of pads through use of multiple well designs and directional drilling; centralizing fracing and water management; minimizing road footprints; centralized support facilities such as tank batteries; collocating utilities and pipelines in common corridors and aligning them along roadways; and implementing intensive interim reclamation practices. The BLM encourages applicants to include in their proposals BMPs such as those identified. If not, BLM will likely require them. Actual BMPs proposed or required during the permitting process to mitigate impacts are expected to vary according to technologies and site-specific needs. BMPs will also be expected to change over the life of a project, being adaptively updated in response to monitoring and changing project conditions. Additional practices could be required or withdrawn, or modified in response to changing activities or future planning. Such adaptive changes to BMPs may generally be implemented without further review or land use planning, but will be analyzed during the NEPA analysis associated with the permitting process. Monitoring and adaptive management practices will help to refine and clarify needed BMPs, consistent with the goals and objectives of this plan.

**Geophysical Exploration**

- If operations open an existing fence, temporary gates will be installed for use during the course of operations, or the fence will be immediately repaired. On completion of operations, fences will be restored to their original condition or better.
- When saturated soil conditions exist, activities on and off roads will be halted until soil dries or is frozen sufficiently for activities to proceed without undue damage and erosion.
- Off-highway vehicle travel will be limited to that necessary to complete the geophysical operations.
- Specialized low surface impact equipment (wide- or balloon-tired vehicles, all-terrain vehicles) or helicopters may be used for activities in off-road areas to protect fragile soils and or other resource values.
- Powder magazines will be located at least a mile from traveled roads, unless otherwise authorized after analysis or review. Loaded shot holes and charges will be attended at all times.
- Materials or equipment related to project activities (e.g., trash, flagging, lath) will be removed to an authorized disposal site.

- Project materials which could be a hazard to public health, safety or resource values will be stored in appropriate secondary containment. No oil or lubricants will be drained onto the ground surface.
- Pre-mobilization inspection will be performed to insure that all construction equipment and vehicles are clean and free of weeds, weed seed, soil and vegetative material prior to moving onto public lands. Driving through or parking on noxious weed infestations will be avoided.
- Topsoil stripping will include all growth medium present at a site, as indicated by color or texture. Stripping and storage depth may be specified during the onsite inspection. All stripped topsoil will be stored separately from subsoil or other excavated material and replaced prior to seedbed preparation. No topsoil will be stripped when soils are saturated or frozen below the stripping depth.
- Cleared vegetation smaller than four inches in diameter will be stockpiled, shredded, and salvaged with topsoil. Cleared vegetation larger than four inches in diameter will be removed from public land or shredded in place to be salvaged with topsoil. A wood cutting permit may be purchased from BLM.
- Shot-hole cuttings will be returned to the hole, or an alternative plan will be submitted for BLM approval.

#### **Reducing Fluid Mineral Development Footprint**

- The operator will co-locate multiple wells on well pads and use directional drilling to reduce the number of pads and roads.
- Pad placement, as practical, will be sensitive to natural resource protection. Surface disturbance will be minimized, especially near drainage features and on soils mapped as Mancos shale.
- To minimize construction disturbance, truck traffic, dust and other impacts to air quality, soils and wildlife, centralized production facilities will be used for all natural gas liquids and produced water.
- Utilities such as gas and water lines, power lines and roads will be located in common corridors where practicable.
- Telemetry will be used to remotely monitor producing wells to reduce vehicular traffic. During winter closures, unavoidable monitoring and or maintenance activities will be conducted between 9 a.m. and 3 p.m., to the extent practical.

#### **Administrative/General and Planning**

- Before activities take place, every pad, access road, or facility site will have an approved surface drainage plan for establishing positive management of surface water drainage, to reduce erosion and sediment transport. The drainage plan will include adaptive BMPs, monitoring, maintenance and reporting. BMPs may include run-on/run-off controls such as surface pocking or revegetation, ditches or berms, basins, and other control methods to reduce erosion. Pre-construction drainage BMPs will be installed as appropriate.

- Before surface disturbance, agreements will be obtained with all existing rights-of-way holders, authorized users and pipeline operators affected by permitted activities. If Agreement cannot be reached, the operator will comply with the law or regulations.
- The BLM will be notified at least 48 hours before construction or reclamation and schedule a pre-construction meeting to facilitate implementation of plans.
- To limit surface disturbance, proposed roads and locations will consider the character of the topography and landform. Deep vertical cuts, long or steep fill slopes and side cuts across steep slopes will be avoided. Rights-of-way will be shared, and structures and facilities will be grouped.
- Project will use existing roads as much as possible. Roads will be designed, constructed and maintained to BLM standards (BLM 1985). All new roads and upgrades will be submitted to BLM for approval before construction.
- Drilling will be done with 'closed loop' systems as much as possible, particularly in areas where water resources are most vulnerable, including: soils mapped as alluvial, colluvial, and glacial deposits; near springs and perennial water sources; in important groundwater recharge areas; and within municipal watersheds.
- Chemicals used in the fracturing process will be biodegradable, non-toxic, pH neutral, residual free, non-corrosive, non-polluting and non-hazardous in the forms and concentrations being used. Documentation in the form of Material Safety Data Sheets will be reviewed by operator for compliance prior to use and Material Safety Data Sheets will remain on site at all times such chemicals are present.
- In municipal watersheds, the operator will develop and implement a Watershed Protection Plan. This plan will characterize baseline hydrologic and hydrogeologic conditions such as but not limited to: water chemistry, water quantity, groundwater flow patterns, connectivity between geologic formations, and communication between surface and groundwater. The operator will collaborate with all watershed stakeholders in development of the plan.
- Incorporate BMPs and conditions of approval from the Final Programmatic EIS for Geothermal Leasing in the Western US, as applicable (BLM 2008).

### **Pre-Construction**

- Pre-mobilization inspections will be performed to be sure that all construction equipment and vehicles are clean and free of soils, weeds, weed seed and vegetative material prior to moving onto public lands. Driving through or parking on noxious weed infestations will be avoided.
- Stakes, snow fence or flagging will be installed to mark boundaries of permitted areas of disturbance, including pre-construction BMPs and soils storage areas and be maintained in place until final construction cleanup is completed.
- Pre-construction drainage BMPs will be installed as appropriate, per the approved surface drainage plan, to protect stream drainages and to reduce erosion and sediment transport.



- Prior to any construction or placement of drilling facilities, the location and access road will be cleared of brush and trees in a manner approved by the BLM.
- Surveys for raptor nests, sensitive plant and animal species and cultural resources will be conducted prior to construction activities following BLM survey standards. Survey results will be submitted to the BLM for analysis and recommendations before project approval.

### **Construction**

- Where applicable, entrances to construction sites shall be covered by a gravel “track pad” to prevent sediment and weed seeds from leaving the construction site.
- As detailed in the site plan for surface water management, drainage from disturbed areas will be confined or directed to minimize erosion, particularly within 100 feet of all drainages. No runoff, including that from roads, will be allowed to flow into intermittent or perennial waterways without first passing through sediment-trapping mechanisms such as vegetation, anchored bales or catchments.
- In areas of mapped Mancos shale, saline soils, or fragile soils, groundwater will not be discharged to surface water drainages, to minimize mobilization and transport of selenium, salts and sediment within the Colorado River Basin.
- Discharge of groundwater to surface drainages will comply with the Clean Water Act and will be pre-approved by BLM and will meet the following criteria:
  - Discharge operations will not negatively impact downstream beneficial uses.
  - Discharge soil/water interactions will not facilitate the movement of water quality contaminants (e.g., salt, selenium, sediment, metals) above natural rates in surface and/or groundwater.
  - Water discharge shall be limited to well-defined major channels, to reduce potential of discharged water dissolving and transporting salts from the stream channel and to reduce concentration of salts in alluvium.
  - Discharges will be limited to a volume that can be handled by the natural channel and less than or equal to the naturally occurring mean annual peak flow (roughly equivalent to a two-year, 24-hour storm peak).
  - Discharge points will be located in stable channels or reservoirs away from any downstream head-cuts or other major erosional features (as determined by BLM). Outfall design may include discharge aprons and downstream stabilization of channel side slopes to prevent erosion and provide energy dissipation.
  - Subject to BLM approval, water quality thresholds for both surface and groundwater will be set and monitored during discharge operations in order that they will cease if thresholds were exceeded.
  - Surface and groundwater quantity and quality will be monitored during all discharge operations. Monitoring locations will be subject to BLM approval.

Monitoring activities will continue for at least two water years following cessation of discharge.

- Surface and ground water withdrawals will be avoided where they will jeopardize discharge to streams, springs, seeps, or fens.
- Project materials which could be hazardous to public health, safety or resource values will be stored in appropriate secondary containment. No oil or lubricants will be drained onto the ground surface.
- Topsoil will be stripped following removal of vegetation during construction of well pads, pipelines, roads, or other surface facilities. This will include all suitable growth medium present at a site, as indicated by color or texture. Stripped topsoil will be stored separately from subsoil or other excavated material and replaced prior to seedbed prep.
- Commercial and non-commercial woodlands removed as a result of development (i.e., oil shale, oil and gas, sodium) will be appraised and purchased prior to removal.
- Trees removed during construction shall be wind-rowed separately from soil stockpiles for later use to obstruct vehicle travel and support reclamation. Following replacement of topsoil and seeding, salvaged trees will be skidded back onto appropriate reclaimed areas. Stumps and rootballs may be buried or scattered in an area approved by the BLM, such as a toeslope.
- Removed trees not used in this way will be cut to four foot lengths if they are four inches or more in diameter, then located where they may be taken from public lands by the applicant or the public. If it is impractical to bring salvaged trees back onto reclaimed areas, they will be chipped and spread on reclaimed areas following seeding. Cleared vegetation smaller in diameter than four inches will also be distributed (no deeper than 1-2 inches) across reclaimed areas following seeding.
- Where linear disturbance is proposed and where habitat fragmentation/edge is an issue for a wildlife species of concern, edges of vegetation removal should be consider 'feathering' the treatment to avoid long linear habitat edges and support habitat complexity for wildlife. Additional trees may be removed along such edges to create irregularly shaped openings and more naturally mosaic habitat.
- No topsoil will be stripped when soils are saturated or frozen; construction will be halted until soil dries out or is frozen sufficiently for construction to proceed without undue damage and erosion.
- To extend the viability of topsoil and create a berm that limits and redirects stormwater runoff, topsoil shall be windrowed around the pad perimeter, per BLM Topsoil BMPs (BLM 2009, PowerPoint presentation available upon request). Topsoil shall also be wind-rowed, segregated and stored along pipelines and roads for later redistribution across disturbed corridors during reclamation. Topsoil berms shall be promptly seeded to maintain soil microbe health, reduce erosion, and prevent weed establishment.
- Roads will be crowned or sloped, ditched, surfaced, drained with culverts and/or water dips, and constructed and maintained to BLM Gold Book standards.

Construction of access roads on steep hillsides and near watercourses will be avoided. Generally, cut slope ratios will be no steeper than 3:1, with fill slopes no steeper than 2:1.

- Access roads requiring construction with cut and fill will minimize surface disturbance and consider the character of the landform's contours, visual contrasts, the cut materials, the depth of cut, where the fill material will be deposited and other resource concerns.
- Fill material will not be cast over hilltops or into drainages without BLM approval.
- Regularly scheduled road maintenance will include, but not be limited to, crown or slope reconstruction, clean-out of ditches, culverts and catchments, replacement of the road surface and dust abatement.
- Cattle guards will be installed and maintained whenever access roads intersect existing gates or fences.
- Construction activities at drainage crossings (e.g., burying pipelines, installing culverts) will be timed to avoid high flow conditions. Construction activities that affect stream flow will consist of either a piped stream diversion or the use of a coffer dam and pump to divert flow around the disturbed area.
- All pipeline welds within 100 feet of a perennial stream will be x-rayed to prevent leakage into the stream. Where pipelines cross streams that support Federal or State-listed threatened or endangered species or BLM-listed sensitive species, additional safeguards such as double-walled pipe, and remotely-actuated block or check valves on both sides of the stream may be used.
- Water from hydrostatic testing of pipelines will be filtered of sediments prior to discharge into wetlands. Energy dissipating methods such as straw-bales, wattles, and vegetative buffers will be in place before any discharge of water.
- When activity in a wetland is unavoidable, the operator will restore all temporarily disturbed wetlands or riparian areas, consulting with the BLM to determine appropriate mitigation, including verification of native plant species to be used in restoration.
- All stream crossings affecting perennial streams or streams supporting riparian habitat shall be professionally engineered (design, construction, and maintenance).
- Where the access road crosses small drainages and intermittent streams not requiring culverts, low water crossings shall be used. The road will dip to the original streambed elevation of the drainage and the crossing will prevent any blockage or restriction of the existing channel. Material moved from the banks of the crossing will be stockpiled nearby for later use in reclamation. Gravel, riprap, or concrete bottoms may be required in some situations.
- Baseline information of channel characteristics and riparian vegetation present must be documented before actions are permitted to disturb riparian areas and the stream channel.

- Damage to range improvements (e.g., fences, gates, reservoirs, pipelines) will be avoided, or repaired and replaced. If an access road crosses an existing livestock fence, a steel frame gate or a cattle guard with associated bypass gate will be installed across the roadway.
- Pits and other containments for mud, cuttings, drilling fluids, and other materials used during the exploration or operation of the lease for the storage of any hazardous materials will be adequately fenced, posted, netted or covered.

### **Drilling**

- Pits that may contain liquid, such as reserve pits, produced water pits, frac-water pits, cuttings trenches (if covered by water/fluid), and evaporation pits, will use netting to prevent or minimize entry or use by migratory birds. They will be fenced on three sides before drilling activity and closed off on the fourth side after drilling is completed.
- If any pit that may contain liquid is constructed with a slope steeper than 3:1, or if the pit is lined, escape ramps will be installed every 50 feet along the pit slope and at each corner to allow escape by livestock and wildlife.
- Catalytic converters will be installed on all internal combustion engines to minimize emissions to Tier 3 levels.
- Hazardous substances will not be used in drilling, testing, or completion operations, nor introduced at any time into the reserve or cuttings pit. Fluids will be confined to pits and all pits that may contain liquids will be lined to protect groundwater. Liners will be maintained in good condition, with no tears or holes, until they are removed when the reserve pit is closed.
- Pits will be constructed so that water will not run into them. Fluid levels will be maintained below 2 feet of the lowest point of containment.

### **Utilization and Production**

- Operations will not damage, disrupt or interfere with water flows and/or improvements associated with springs, wells, or impoundments.
- When special resource values are at risk, such as crucial wildlife areas, companies controlling access into these areas will close roads or restrict use to authorized users.
- Pits will be promptly drained, tested, closed and reclaimed according to local state and federal regulations.
- Dust from vehicular traffic, equipment operations, or wind events will be controlled as needed. No application of surfactants or dust agents will proceed without BLM approval. In areas with soils mapped as Mancos shale, application of water on native road surfaces will be limited, to minimize mobilization of selenium. In such areas, alternate dust abatement measures such as proper road surfacing and maintenance, and speed limits will be used, subject to BLM approval.



- Speed control measures will be in place on all project related unpaved roads to reduce fugitive dust.
- Noise will be minimized by methods such as closed compressor buildings and hospital grade mufflers.
- Pipeline warning signs permanently marked with the operator's and owner's names (emergency contact) and purpose (product) of the pipeline will be installed within five days of construction completion and before use of the pipeline for transportation of product.
- All production equipment with a chimney, vent, or stack shall be fitted with a device to prevent birds from entering or perching on the chimney, such as an excluder cone or equivalent.
- Production facilities such as tanks and dehydration equipment will be centralized rather than located on each well pad whenever practical. Wellheads and metering facilities will remain on individual pads.
- Production facilities will be located and arranged to facilitate safety and maximize areas to be reclaimed.

#### **Site Stabilization, Reclamation, and Monitoring**

- Road and pipeline reclamation, including seedbed prep and seeding of temporarily disturbed areas will be completed within 30 days following completion of construction.
- Following completion of pad construction, topsoil storage piles, stormwater control features, and cut-and-fill slopes will be temporarily seeded, to stabilize the materials, maintain biotic soil activities, and minimize weed infestations. When this is not feasible, disturbed surfaces may be stabilized using other methods like hydro-mulch or erosion matting while vegetation is establishing. Seedbed preparation is not generally required for topsoil storage piles or other areas of temporary seeding.
- Interim reclamation
  - Interim reclamation includes recontouring and revegetating the entire portion of the disturbed area except that part of the well pad needed for production activities.
  - It will be completed within six months following completion of the last well planned for the pad or after a year has passed with no new wells drilled on the pad. All areas unnecessary to production activities will be revegetated, including the area within the remaining rig anchors. In special cases, an exception to this will be requested.
  - Before interim reclamation is scheduled, the operator will meet with BLM to inspect the disturbed area, review the existing reclamation plan, and agree upon any revisions to it.

- All parts of the pad unnecessary for long-term operations will be reshaped to blend with natural topography, covered evenly with topsoil and a seedbed prepared.
  - For cut-and-fill slopes, initial reclamation will typically consist of moving fill material back into cuts, back-filling and reshaping to achieve the configuration specified in the reclamation plan. Compacted areas will be well ripped in two passes at perpendicular directions. In fragile or loose soils, compaction techniques such as tread-walking may be necessary to prevent high erosion hazard. Topographic contours will be reshaped to blend with natural topography. These may include berms and swales to manage water drainage, support revegetation, mitigate visual impacts and maximize natural appearances.
- Good seedbed preparation is key to soil stabilization, moisture infiltration, and improving the chances for revegetation success.
  - Following contouring, backfilled or ripped surfaces will be covered evenly with topsoil.
  - Within 24 hours of broadcast seeding, the spread topsoil will be roughened by a method such as pitting, raking or harrowing before seeding, to break up any crust that has formed and ensure good seed-to-soil contact.
  - To control erosion and enhance vegetative establishment on slopes steeper than 3:1, or to create a more natural looking landscape in areas of visual sensitivity, seedbed preparation may include pocking or pitting the soil material to form microbasins scaled to the site and materials. These microbasins will be constructed in irregularly spaced and irregularly aligned rows with an orientation perpendicular to the natural flow of runoff down a slope.
  - Requests to use soil amendments, including fertilizer and soil conditioners, will be submitted to the BLM for approval. Submittal will include basic information on the amendment and the purpose of its use.
- Seed mixes will typically consist of native, early-succession species, or species with the ability to establish quickly in disturbed soil areas. Non-native species considered desirable under special circumstances, such as sterile non-native grasses will be submitted to the BLM for approval before use.
  - Seed mix composition will be calculated based on the number of Pure Live Seed per pound rather than percentage by weight. Seeding rate in pounds per acre will be based on the total number of Pure Live Seeds per square foot.
  - Weed free seed will be used. It will contain no noxious, prohibited, or restricted weed seeds and no more than 0.5 percent by weight of any other weed seeds. Seed may contain up to 2.0 percent of “other crop” seed by weight, including the seed of other agronomic crops and native plants; however, a lower percentage of other crop seed is recommended. To maintain quality, purity, germination, and yield, only tested, certified seed for

the current year, with a minimum germination rate of 80 percent and a minimum purity of 90 percent will be used unless otherwise approved by BLM in advance of purchase. Seed shall be viability-tested in accordance with State law(s) and within nine months before purchase.

- Seed mixes for temporary use may contain one or more sterile hybrid grasses or other non-native cover crop in addition to native perennial species, if pre-approved by BLM.
- For private surfaces, BLM-approved seed mixes will be recommended, but the surface landowner has ultimate authority over the seed mix to be used in reclamation.
- Seed tags or other official documentation of the seed mix will be supplied to the BLM for approval at least 14 days before the date of proposed seeding. Seed that does not meet the above criteria will not be applied to public lands. A Sundry Notice describing the completed work, the weed-free certification, and the seed tag(s) will be submitted BLM within 30 days after seeding.

- Seeding Procedures

- Seeding will be conducted no more than 24 hours following completion of final seedbed preparation (see Seedbed Prep).
- Where practical, seed will be planted by drill-seeding to a depth of 0.25 to 0.5 inch along the contour of the site. Drill seeding will be followed by cultivation to enhance seed-to-soil contact and prevent losses of both. Where drill-seeding is impracticable, seed may be installed by broadcast-seeding at twice the drill-seeding rate, followed by raking or harrowing to provide 0.25 to 0.5 inch of soil cover. Hydro-seeding and hydro-mulching may be used in temporary seeding or in areas where drill-seeding or broadcast-seeding/raking are impracticable. Hydro-seeding and hydro-mulching must be conducted in two separate applications to ensure adequate seed-to-soil contact.
- If interim revegetation is unsuccessful, reseeding will be repeated annually until satisfactory vegetative cover has been achieved. Requirements for reseeding of temporary areas will be considered on a case-by-case basis. Seeding will be considered successful when the site is protected from erosion and revegetated with a vigorous, self-sustaining, and diverse cover of native (or otherwise approved) plant species. BLM shall not require reseeding during periods that have proven less than optimal.

- Mulch

- Mulch will be applied within 24 hours following completion of seeding. Where areas have been drill- or broadcast-seeded and raked, certified weed-free straw or certified weed-free native grass hay mulch will be crimped into the soil. Hydro-mulching may be used in areas of interim reclamation where crimping is impractical, in areas of interim reclamation that were hydroseeded, and in areas of temporary seeding regardless of seeding method.

- Mulch will not be applied in areas where erosion potential necessitates use of a biodegradable erosion-control blanket (straw matting).
- Cut and fill slopes will be protected against erosion by contour grading, microbasins or other measures approved by the BLM. Well anchored BMPs such as biodegradable matting, weed-free bales or wattles may also be used on cut-and-fill slopes and along drainages to protect against soil movement.
- The reclaimed pad will be protected from disturbance by a fence to exclude livestock grazing for the first two growing seasons or until seeded species are firmly established, whichever comes later. Seeded species will be considered firmly established when at least 50 percent of the new plants are producing seed.
- Monitoring. Because weed and reclamation management activities are components of a long-term process, monitoring and reporting are integral to and long-term commitment to land health.
  - All sites considered as “operator reclamation in progress” will be routinely monitored for reclamation success. Reports will be submitted to the BLM by December 1 of each year. Annual reports will include whether accomplishment of objectives appears likely and of not, what corrective actions are proposed.
  - All sites will be routinely monitored for the presence of noxious weeds or other undesirable plant species as set forth in the joint BLM/Forest Service Noxious and Invasive Weed Management Plan for Oil and Gas Operators. Pesticide Use Proposals will be approved by the BLM before application of herbicides. Annual weed monitoring reports shall be submitted to the BLM by December 1. They will include weed species found (listed by common names), total acres infested with weeds, total acres treated, treatment methods, and total pounds of active ingredient of pesticides applied. All Noxious Weed Inventory and Pesticide Application records for that year will be included with the report.
- Visual Resources
  - Every proposal will include a detailed, site-specific description and plan of how it will meet the VRM Class of the area where it is proposed. As much as possible all proposed features will be located and placed to avoid or minimize visibility from travel corridors, residential areas, and other sensitive observation points.
  - To the extent practical, existing vegetation shall be preserved when clearing and grading for pads, roads, and pipelines. Cleared trees and rocks may be salvaged for redistribution over reshaped cut-and-fill slopes or along linear features.
  - Above-ground facilities will be painted a non-reflective natural color selected to minimize contrast with adjacent vegetation or rock outcrops. Colors may be specified by the BLM on a project-by-project basis.



- Adaptive management techniques may be applied before or after construction to mitigate straight-line visual contrast effects of pad margins, cut and fill slopes, pipeline alignments or other cleared vegetation. This could include additional tree removal along contrasting edges, to create irregularly shaped openings or more natural-looking mosaic patterns, or treating surfaces to mitigate visual contrasts in color or surface texture.

### **References**

- BLM (United States Department of the Interior, Bureau of Land Management). 1985. BLM Manual 9113: Roads. Release 9-247. BLM, Washington DC. June 7, 1985. 83 pp.
- \_\_\_\_\_. 1992. Handbook H-3042-1: Solid Minerals Reclamation. Release 3-275. BLM, Washington, DC. April 8, 1992. 104 pp.
- \_\_\_\_\_. 2002. Handbook H-3600-1: Mineral Materials Disposal. Release 3-315. BLM, Washington, DC. February 22, 2002. 171 pp.
- \_\_\_\_\_. 2007. Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development – The Gold Book. BLM/WO/ST-06/021+3071/REV 07. BLM, Denver, CO. 84 pp.
- \_\_\_\_\_. 2008. Record of Decision, Programmatic Environmental Impact Statement for Geothermal Leasing in the Western United States – Appendix B. BLM Washington Office. December 2008.

## **RENEWABLE ENERGY**

- Authorize rights-of-way by applying appropriate BMPs from the BLM Record of Decision for Implementation of a Wind Energy Development Program (BLM 2005), land use restrictions, stipulations, and mitigation measures.

### **References**

- BLM (United States Department of the Interior, Bureau of Land Management). 2005. Record of Decision for Implementation of a Wind Energy Development Program and Associated Land Use Plan Amendments. BLM, Washington, DC. December 15, 2005.

## **TRANSPORTATION AND ACCESS**

### **Standard Operating Procedures**

- Continue coordination with counties and other agency road entities to promote utilization of best management practices for road maintenance they perform within UFO boundaries.
- Maintain an inventory of existing road and trail systems.
- BLM Manual 9113, Roads (BLM 1985a) and BLM Handbook 9113-2, Roads – Inventory and Maintenance (BLM 1985b) will be used to guide all maintenance and road construction designs and requirements. Include definitions for functional road classification and maintenance levels for BLM roads.

- All highway rights-of-way and other road authorizations will contain noxious and invasive weed stipulations that include prevention, inventory, treatment, and revegetation or rehabilitation. Road abandonment will include at least three years of post abandonment monitoring and treatment.

#### **Best Management Practices**

- In order to ensure public access and safety, the UFO shall continue an active road maintenance program employing the use of redesign, blading, brush removal for sight distance as appropriate, scarification, graveling, water barring, low water crossings, spur ditching, seeding and installation/cleaning of culverts.
- NEPA Requirements – No new NEPA analysis will be required for road maintenance activities within the defined maintenance disturbance/easement footprint, which is defined as previously disturbed or maintained. Disturbance outside of the defined maintenance disturbance/easement footprint or road realignment will be subject to additional NEPA compliance.

#### **References**

- BLM (United States Department of the Interior, Bureau of Land Management). 1985a. BLM Manual 9113: Roads. Release 9-247. BLM, Washington DC. June 7, 1985. 83 pp.
- \_\_\_\_\_. 1985b. BLM Handbook 9113-2, Roads – Inventory and Maintenance. Release 9-250. BLM, Washington DC. December 19, 1985. 18 pp.

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# Appendix H

Colorado BLM Comprehensive Air Resource  
Protection Protocol





February 2014



# **COLORADO BUREAU OF LAND MANAGEMENT**

## **COMPREHENSIVE AIR RESOURCE PROTECTION PROTOCOL (CARPP)**

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## CARPP CHANGE HISTORY

SECTION	REVISION	DATE
III.D.1	Amended paragraph to reflect final approved LN language.	2/11/2014

# COMPREHENSIVE AIR RESOURCES PROTECTION PROTOCOL (CARPP)

## SECTION 1 – PURPOSE, SCOPE, AND RESPONSIBILITIES

This Comprehensive Air Resources Protection Protocol (CARPP) describes the process and strategies the BLM will use when authorizing activities that have the potential to adversely impact air quality within the state of Colorado. This protocol also outlines specific measures that may be taken to address BLM-approved activities with the potential to cause significant adverse impacts to air resources (via the generation of significant quantities of air emissions) within any planning area (as determined on a case by case basis). Further, the purposes of this protocol are to address air quality issues identified by the Bureau of Land Management (BLM), or public scoping, in its analysis of potential impacts on air resources for BLM Colorado Resource Management Plans and Environmental Impact Statements (RMP/EIS); and clarify the mechanisms and procedures that BLM will use to achieve the air resources goals, objectives, and management actions set forth in BLM Colorado RMPs.

### **I.A CARPP Scope**

The CARPP is not a decision document, but rather a strategy to address air quality concerns throughout BLM-managed lands and resources in Colorado. Because the CARPP is not a field office specific management tool, it may be modified as necessary to comport or comply with changing laws, regulations, BLM policy, or to address new information and changing circumstances without maintaining or amending any specific Field Office RMP (see reference version date on the cover page).

However, changes to the goals, objectives, or management actions set forth in any Colorado Field Office RMP/EIS as a result of the changes in the CARPP (or more specifically, any subsequent analysis based on such changes) would require an amendment of the specific RMP being affected.

### **I.B BLM Responsibilities under FLMPA and MLA**

The BLM has the authority and responsibility under the Federal Land Policy and Management Act (FLPMA) to manage public lands in a manner that will protect the quality of air and atmospheric values [FLPMA Sec. 102(a)(8)]. The FLPMA also provides that the public lands be managed in a manner which recognizes the Nation's need for domestic sources of minerals, food, timber, and fiber from the public lands and includes provisions for implementing the Mining and Minerals Policy Act of 1970 [FLPMA Sec. 102(a)(12)]. The BLM has the responsibility under the Mineral Leasing Act (MLA) to implement the decisions of any RMP/EIS in a manner that recognizes valid and existing lease rights<sup>1</sup>.

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<sup>1</sup> H-1601-1 - LAND USE PLANNING HANDBOOK: A plan-level decision to open the lands to leasing represents BLM's determination, based on the information available at the time, that it is appropriate to allow development of the parcel consistent with the terms of the lease, laws, regulations, and orders, and subject to reasonable conditions of approval. When applying leasing restrictions, the least restrictive constraint to meet the resource protection objective should be used.



Further, the FLPMA provides that “In the development and revision of land use plans, the Secretary shall provide for compliance with applicable pollution control laws, including State and Federal air, water, noise, or other pollution standards or implementation plans;” [FLPMA Sec. 202(c)(8)]<sup>2</sup>.

## **SECTION II – INTERAGENCY AIR RESOURCES COLLABORATION**

The Bureau of Land Management is firmly committed to working with federal, state, tribal, and local air resource management partners to address complex and often cross-jurisdictional air quality issues. As a federal agency, we have a role to provide leadership in addressing known air quality issues within our authority and domain, while upholding our responsibility to manage the public lands for multiple-use under the FLPMA. We also recognize that the State of Colorado, specifically the Colorado Department of Public Health and Environment (CDPHE), has the primary responsibility and authority delegated by the EPA to regulate and maintain air quality standards within Colorado in accordance with the Clean Air Act. Interagency collaboration is the key to management of air quality, as no single agency has all the necessary tools to solve these complex issues alone. We must act together.

To that end the BLM will work collaboratively with other local, state, federal, and tribal agencies involved in the management of air resources to develop a comprehensive strategy to protect air resources from potentially significant adverse impacts resulting from BLM approved activities in Colorado.

### **II.A National Air Quality MOU**

When making oil and gas implementation decisions, the BLM will consider or apply, as appropriate, the provisions of the *Memorandum of Understanding Among the US Department of Agriculture, US Department of the Interior, and US Environmental Protection Agency, Regarding Air Quality Analyses and Mitigation for Federal Oil and Gas Decisions Through the NEPA Process*, signed June 23, 2011.

## **SECTION III – ACTIONS TO ANALYZE & PROTECT AIR QUALITY**

The following sections describe actions the BLM will take to ensure an adequate analysis and subsequent protection for air quality resources within Colorado. Appropriate air resources protection requires the BLM to manage its authorized activities and actions at broad spatial and temporal scales that are dynamic and thus subject to change. The BLM will accomplish this through an adaptive management approach, which includes establishing baseline conditions, monitoring, reevaluation, and adjustment as necessary. Adaptive management therefore contemplates regular review and adjustment of management approaches during the authorization of emissions generating activities commensurate with changing circumstances.

### **III.A MONITORING**

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<sup>2</sup> *Note:* Where sources of air pollution emissions are regulated by an entity/agency (Federal, State, Tribal, Local), the BLM shall not craft alternatives with features or conditions that interfere with a proponents ability to comply with such laws or standards. IBLA has held that the meaning of “providing for compliance” does not require that the BLM has any obligation to ensure compliance where another agency holds such responsibility [*Wyoming Outdoor Council, et al* 176 IBLA 15, 27 (2008); Powder River Basin Resource Council, 183 IBLA 83, 94-95 (2012)]. However, the BLM should appropriately analyze such sources (as well as non-regulated sources) within the applicable NEPA context to disclose potential impacts, determine significance, and provide for mitigation as necessary and within our authority for any specific finding.

Ambient air monitoring provides valuable data for determining current and background concentrations of air pollutants, describing long term trends in air pollutant concentrations, and evaluating the effectiveness of air control strategies. The BLM's comprehensive air resource protection protocol includes the ambient air monitoring measures described in this section.

### **III.A.1 – Air Monitoring Network**

The BLM will participate in a cooperative effort with industry, CDPHE, Forest Service, National Park Service, EPA, local counties, and other entities as appropriate, to establish, operate, and maintain a comprehensive air monitoring network within the planning areas where a need for monitoring has been identified (contingent upon available funding). The BLM will cooperate in the sharing of air monitoring data collected by the air monitoring network with other agencies and the public.

### **III.A.2 – Pre-Construction Air Monitoring**

The BLM may request proponents of projects with the potential to generate significant air emissions, to submit pre-construction air monitoring data from a site within or adjacent to the proposed development area. The purpose of this air monitoring is to determine baseline air quality conditions prior to development at the site. The need for monitoring will be determined by the BLM based on the availability or absence of existing representative air monitoring data and the factors listed in Section III.D of this protocol. If the BLM determines that pre-construction monitoring is necessary, the project proponent must provide a minimum of one year of representative ambient air monitoring data for the pollutants of concern. The project proponent will be responsible for siting, installing, operating, and maintaining any new air monitoring equipment needed to fulfill this requirement in the absence of existing representative air monitoring data.

### **III.A.3 – Life of Project Air Monitoring**

The BLM may require proponents or operators of Federal mineral development projects, or proponents of other potentially significant emission generating projects, to conduct air monitoring for the life of the project based on the availability or absence of representative air monitoring data and the factors listed in Section III.D of this protocol. The purpose of this air monitoring is to measure impacts potentially attributable to the project over time and to determine the effectiveness of emissions control measures required for the project. The project proponent will be responsible for siting, installing, operating, and maintaining any new air monitoring equipment needed to fulfill this requirement in the absence of existing representative air monitoring data.

### **III.A.4 – Monitoring Data Transparency**

Project-specific monitoring data may be used by the BLM in subsequent NEPA analysis required for project approvals. Thus public disclosure of such data is assured via the NEPA process, if used. Additionally, the BLM will ensure that ambient air monitoring data collected as a COA for any BLM authorized activity will be made publicly available within the body of our annual report required under Section V of this protocol.

### **III.B EMISSIONS INVENTORIES**

The BLM will request the proponent of an oil and gas development activity (as proposed in a permit application, plan of development, or Master Development Plan) to submit a comprehensive inventory of anticipated direct and indirect emissions associated with the proposed project. The emissions inventory will include estimated emissions of regulated air pollutants from all sources related to the proposed activity, including fugitive emissions and greenhouse gas emissions, for each year or distinct project phase over the life of the project. The BLM will review the emissions inventory to determine its completeness and accuracy. In most cases the BLM will accept inventory data reported to other agencies for the purposes of meeting this requirement. For example BLM would accept copies of actual emissions data for criteria pollutants, volatile organic compounds, hazardous air pollutants, and greenhouse gases that are submitted to CDPHE as required for applicable air permitting or APEN requirements, or submittals to COGCC in the form of drilling and production data reports, and data to EPA under the Greenhouse Gas Reporting Rule (40 CFR Part 98 Subpart W) for the authorized action.

### **III.C MODELING**

Air dispersion and photochemical grid models are useful tools for predicting project-specific impacts on air quality, predicting the potential effectiveness of control measures and strategies, and forecasting trends in regional concentrations of air pollutants. The BLM will use regional air modeling and project-specific modeling, in conjunction with other air analysis tools, to develop air resource protection strategies consistent with our responsibilities under FLPMA. Further, the BLM will provide appropriate disclosure for any modeling of direct, indirect, and cumulative impacts of proposed actions during the required NEPA analysis.

#### **III.C.1 – Project-specific Modeling**

The BLM may require project-specific air quality modeling, consistent with the Air Resources MOU to analyze potential impacts from a proposed Federal mineral development project or other proposed activity that has the potential to emit significant quantities of a regulated air pollutant and the effectiveness of any air emission control measures. Project proponents may submit results from other modeling analyses that include activities similar to the proposed project for BLM's review and approval, and if approved, those modeling results may be used in lieu of new project-specific modeling. The decision as to whether to require air quality modeling will be based on factors listed in Section III.D of this protocol. The BLM will not require an air modeling analysis when it can be demonstrated that the project will not cause a substantial increase in emissions of the pollutants of concern.

#### **III.C.2 – Modeling Protocol**

The BLM will determine the parameters required for a project-specific modeling analysis through the development of a modeling protocol for each analysis. When conducting a regional model or EIS level project specific oil and gas air modeling analysis, the BLM will adhere to the *Memorandum of Understanding Among the US Department of Agriculture, US Department of the Interior, and US Environmental Protection Agency, Regarding Air Quality Analyses and Mitigation for Federal Oil and Gas Decisions Through the NEPA Process*, signed June 23, 2011.

### **III.C.3 – Regional Air Modeling**

The BLM will support and participate in regional modeling efforts through multi-state and/or multi-agency organizations such as Western Governors' Association – Western Regional Air Partnership (WRAP) and the Federal Leadership Forum (FLF). In addition, BLM will, contingent upon available funding, conduct and facilitate regional air modeling as needed. Currently, the BLM is facilitating the Colorado Air Resources Management Modeling Study (CARMMS). CARMMS is a BLM funded regional air quality modeling study of expected impacts on air quality from projected increases in oil and gas development across Colorado and certain upwind adjacent states.

- The CARMMS modeling protocol/study will be developed by the BLM with involvement from appropriate local, state, federal, and tribal agencies involved in the management of air resources and the authorization and regulation of oil and gas development.
- The CARMMS results will include the predicted impacts from all projected federal and non-federal oil and gas development within the region.
- The CARMMS results and analysis will be made available to the public.

### **III.C.4 – Evaluation of Modeling Results**

The BLM will cooperate in an interagency process to develop a comprehensive strategy to manage air quality impacts from future oil and gas development within the region. As part of that strategy, the local, state, federal, and Tribal agencies involved in the regulation of air quality and the authorization of oil and gas development would evaluate modeling results from CARMMS or other future modeling studies and identify potential air quality concerns and necessary reductions in air emissions. If the modeling predicts significant impacts, these agencies would use their respective authorities to implement appropriate enhanced emission control strategies, operating limitations, equipment standards, and/or pacing of development.

### **III.C.5 – Future Modeling Studies**

Future iterations of the CARMMS, or a similar regional modeling study of expected impacts from oil and gas development, may be conducted through a collaborative interagency management mechanism and interagency / industry funding mechanism.

## **III.D PERMITTING**

As part of the NEPA process and prior to the authorization of any Federal mineral development activity the BLM will conduct an air analysis to determine the potential impacts on air quality based on the estimated emissions from the activity being authorized. The BLM may conduct such an analysis for other authorized activities with the potential to generate significant emissions of a regulated pollutant. The BLM will consider the following factors to identify pollutants of concern and make decisions regarding the appropriate level of air analysis, monitoring, and reporting requirements for the proposed activity.



- magnitude of potential air emissions from the proposed activity
- duration of proposed activity and distinct phase considerations
- proximity to a federally mandated Class I area, sensitive Class II area (as identified on a case-by-case basis by CDPHE or a federal land management or tribal agency), population center, or other sensitive receptor
- location within or adjacent to a non-attainment or maintenance area
- meteorological and geographic conditions
- existing air quality conditions including measured exceedances of NAAQS or CAAQS and measured adverse impacts on air quality related values (AQRVs) at Class I and sensitive Class II areas
- intensity of existing and projected development in the area
- issues identified during project scoping

#### **III.D.1 – Statewide Lease Notice**

The following Lease Notice language will be incorporated into all new leases.

*Due to potential air quality concerns, supplementary air quality analysis may be required for any proposed development of this lease. This may include preparing a comprehensive emissions inventory, performing air quality modeling, and initiating interagency consultation with affected land managers and air quality regulators to determine potential mitigation options for any predicted significant impacts from the proposed development. Potential mitigation may include limiting the time, place, and pace of any proposed development, as well as providing for the best air quality control technology and/or management practices necessary to achieve area-wide air resource protection objectives. Mitigation measures would be analyzed through the appropriate level of NEPA analysis to determine effectiveness, and will be required or implemented as a permit condition of approval (COA). At a minimum, all projects and permitted uses implemented under this lease will comply with all applicable National Ambient Air Quality Standards and ensure Air Quality Related Values are protected in nearby Class I or Sensitive Class II areas that are afforded additional air quality protection under the Clean Air Act (CAA).*

#### **III.E MITIGATION**

Many activities that the BLM authorizes, permits, or allows generate air pollutant emissions that have the potential to adversely impact air quality. The primary mechanism to reduce air quality impacts is to reduce emissions via project design features and mitigation. Appropriate emission reduction measures are best identified and required at the project authorization stage, when the temporal and spatial characteristics and technological specifications of the proposed action have been defined. The project-specific information available at that stage allows for the development of an emissions inventory and impact analysis that can be used to identify effective mitigation options for predicted adverse impacts. Section VI, Emissions Reduction Strategies and Best Management Practices, provides some emission reduction technologies and strategies as an

example. The list in Table VI-1 is not intended to be all inclusive or preclude the use of other effective air pollution control technologies that may be proposed.

The BLM will ensure implementation of reasonable mitigation, control measures, and design features through appropriate mechanisms, including lease stipulations identified in RMPs, notices to lessees, and conditions of approval (permit terms and conditions) as provided for by law and consistent with lease rights and obligations. In the absence of, or in addition to effective control technologies, the BLM may manage the pace, place, density, and intensity of leasing and development to meet air quality goals and objectives as defined under any applicable RMP.

### **III.E.1 – Emissions Reduction Planning / Minimizing Air Emissions**

The BLM will request proponents of oil and gas development projects that have the potential to significantly adversely impact air quality or predicted to exceed an air quality standard to provide an emissions reduction plan where air quality has been identified as a resource of concern in applicable NEPA analysis. Plans shall include a detailed description of operator committed measures to reduce project related air pollutant emissions including greenhouse gases and fugitive dust. All projects are required to comply with all applicable state and federal regulations.

### **III.E.2 – Project-specific Mitigation**

If the project-specific air quality analysis predicts future impacts on NAAQS or CAAQS (i.e. exceedances) or adverse impacts to AQRVs in Class I or sensitive Class II areas, the BLM will analyze air quality mitigation measures for emission sources. Further, if the regional air quality modeling study conducted under Section III.C.3 predicts significant cumulative impacts on air resources from expected oil and gas development in the region, the BLM may require the proponent of an oil and gas development project to apply reasonable mitigation including but not limited to best management practices (see Section VI), emissions offsets, and other control technologies or strategies identified in the project-specific air quality analyses.

Where identified and analyzed mitigation measures cannot be reasonably implemented for a particular proposed action due to the overall project design, or substantial technical or economic barriers, the BLM will work with project proponents during the NEPA process to develop operator-committed measures or acceptable emissions offsets that would be included as conditions of approval (COA). Any operator committed measures would be required to provide an air quality benefit sufficient in type, scale, location, and timing to avoid the anticipated adverse impact or at a minimum, to reduce it to an acceptable level for the specific area and pollutant(s) analyzed.

## **III.F Protocol Implementation**

The BLM will ensure that air resource protection strategies and mitigation measures are implemented by including project-specific COAs (operator-committed and/or required mitigation) for each authorized action. Any COAs applied to projects as a result of this process shall be clearly consistent with the applicable RMP management decisions and/or subsequent analysis of new or previously unavailable information upon which the BLM can reasonably rely.

## **SECTION IV – ADAPTIVE MANAGEMENT PROCESSES FOR AIR RESOURCES**

Adaptive management incorporates the principles of monitoring current conditions, predicting future impacts, and adapting management strategies to account for changing conditions. An adaptive management strategy for air quality resources allows the BLM to comply with NEPA and complete an appropriate analysis to ensure that activities approved by the BLM minimize adverse impacts to air quality; while allowing for development of important domestic energy resources.

The BLM will implement an adaptive management strategy to account for changing air quality conditions and to minimize adverse impacts to air resources from BLM-authorized activities. The strategy includes evaluating air quality on an on-going basis, and if necessary, implementing appropriate mitigation measures to meet the identified objectives and targets for any applicable Colorado RMP. The adaptive management strategy is intended to be transparent and as such the process includes an annual reporting component that will be made available to the public, as well as case by case incorporation of specific plan elements within individual project approvals. Components of this adaptive management strategy include the following:

### **IV.A Establish Baseline Air Quality Conditions**

Existing air quality conditions will be established and continuously updated on an annual basis. To establish a periodic baseline, data must be compiled and analyzed such that air quality value trends (NAAQS & AQRVs for Class I and sensitive Class II areas) can be established or evaluated for the purpose of predicting future impacts from BLM-authorized activities. Sources of data for this analysis may include raw air quality monitoring station data, air quality monitoring reports prepared by others (CDPHE, EPA, NPS or USFS), and/or appropriate regional modeling results.

In addition to monitored or predicted background data, regional emissions inventories will be continuously or periodically updated to reflect the annual mass of pollutants added to the atmosphere. The data will provide an understanding between mass emissions and monitored/modeled air quality conditions and provide a reasonable basis from which to evaluate impacts from future projects or actions.

The last component of the baseline analysis includes providing a brief synopsis of the current meteorological conditions that exist for any planning area such that exceptional events and historical deviations in atmospheric values can be documented to provide additional context for the observed/reported air quality values.

### **IV.B Emissions Tracking**

To provide for the periodic baseline the BLM will use the project-specific information used in its NEPA analyses as a mechanism to track emissions of criteria pollutants, volatile organic compounds, hazardous air pollutants, and greenhouse gases from BLM authorized oil and gas activities within each field office planning area. (NOTE: the BLM may incorporate emissions inventories for other authorized activities with significant emissions to provide for an appropriate cumulative inventory, where such sources are not already included as a Colorado Air Pollution Emissions Notice, or National Emissions Inventory component). The BLM will use emissions data from APDs to inform iterative elements of our adaptive management strategy, including modeling inputs and any subsequent prescriptive or comparative project tiering from any applicable modeling results.

#### **IV.C Prescriptive Model Validation**

Prescriptive model validation includes comparing the annual NEPA emissions data from BLM authorized oil and gas activities within the planning areas to emission levels analyzed in the CARMMS modeling study (or the most recent BLM or interagency air impacts analysis conducted in accordance with the provisions of the modeling Section III above). Emissions data will include specific oil and gas indicators, such as the number of wells drilled, number of producing wells, production data, compressor stations installed, centralized liquids gathering stations, and gas treatment facilities constructed. The actual emissions levels and new baseline air quality observations will be correlated against the modeled parameters to determine the reasonableness of the model for predicting impacts and its continued appropriateness as a reference for any subsequent project analysis.

If during the course of our annual analysis it is determined that the model has not demonstrated a reasonable correlation of predicted impacts (for modeled emissions inventory levels) compared against the actual emissions recorded for a planning area, the BLM will investigate the potential sources of the discrepancy to determine a potential cause, such as meteorological factors (ex: winter time ozone, which cannot be modeled at this time), or free mineral development (i.e. non-BLM authorized actions). If a probable cause for the discrepancy cannot be established, then the BLM will initiate interagency coordination with our regulatory partners to determine if a new modeling analysis is potentially warranted.

#### **IV.D Responding to Monitored Exceedances of the NAAQS**

If during the course of a year a Federal Reference or Equivalent air monitor within any planning area records a validated exceedance of any NAAQS (excluding any non-attainment areas) the BLM will review the available data to determine if any BLM authorized activity caused or significantly contributed to the exceedance event. The review will encompass the following steps.

##### **IV.D.1– QA/QC**

The BLM will ensure the validity of the monitored data by: (a) reviewing Quality Assurance/Quality Control (QA/QC) metadata to ensure against false high readings, and (b) reviewing meteorological data to determine if an exceptional atmospheric event such as stratospheric ozone intrusion occurred. The BLM may contact CDPHE for technical consultation and concurrence regarding possible exceptional events.

##### **IV.D.2– Screening Analysis**

If the monitoring data are validated, the BLM will conduct a screening analysis to determine the likely cause, source, or origin of the exceedance and whether any BLM authorized source(s) within or adjacent to the planning area caused or contributed to the monitored exceedance. If the screening analysis indicates BLM-authorized sources did NOT cause or significantly contribute to the exceedance, then no further action will be taken by the BLM. The data, analysis, and conclusions will be included in the annual public report described under I.C above.

**IV.D.3– Enforcement**

Should the results of the screening analysis indicate that a BLM authorized source(s) caused or significantly contributed to the monitored exceedance, the BLM will review the COA from the authorization for the source(s) to determine if all the COA were implemented as required. Where it is determined that operators did not comply with the conditions of approval for their authorized activities, and did not submit an appropriate sundry notice for approved deviations from such conditions, BLM may issue a notice of incident of noncompliance or take other appropriate enforcement action.

**IV.D.4– Contingency Planning**

If, after review the BLM determines that an authorized source(s) caused or significantly contributed to the monitored exceedance, the BLM will initiate consultation with CDPHE, EPA, and any other applicable local, state, federal, and tribal agencies with responsibility for managing air resources to address appropriate responses to the monitored exceedances. Responses to monitored exceedances may include employing more stringent mitigation measures within the agencies' respective authority to reduce projected future emissions and performing additional modeling and analysis to determine the overall effectiveness of such mitigation measures.

Additionally, the BLM may implement reasonable temporary measures that have been included in a project specific authorization as conditions of approval, which could limit drilling operations, completions or well stimulations, blowdowns, or other non-essential operations during specified time periods (i.e. a timing limitation). Other actions the Bureau may take would include limiting the number of annual APD approvals issued for the affected area until such time that updated regional modeling can be conducted to provide an appropriate assessment of the expected impacts from a reasonable level of development.

**IV.E Evaluating Projected Future Development/Emissions**

Periodically, but not less than every three years, the BLM will evaluate the available or reasonably foreseeable oil and gas development projections for each planning area for the following three to five year period, and compare these projected levels to the level of predicted future development analyzed in the CARMMS modeling study (or the most recent BLM or interagency air impacts analysis conducted under the provisions of the modeling section(s) III.C.3 or III.C.5 above). The BLM will use the projected development/emissions data to determine whether the modeling analysis remains appropriate as a reference for any subsequent project analyses.

**SECTION V – ANNUAL SUMMARY REPORT**

Annually, the BLM will prepare a comprehensive summary report (from actual project data and analysis). This report will be made available to the public. The BLM will use this annual review to evaluate whether current air resources protection strategies are meeting the goals and objectives established within the BLM Colorado RMPs. If the analysis shows that the strategies are not achieving our defined air resource protection goals, the BLM will collaborate with CDPHE and the EPA to develop or modify air resource protection strategies as necessary to effectively protect air resources within any



deficient planning area. Should this result in changes to RMP goals and objectives, additional planning level analyses will be required.

## SECTION VI – OIL AND GAS DEVELOPMENT EMISSIONS REDUCTION STRATEGIES & BMPs

Table VI-1 displays some emission reduction measures, their potential environmental benefits and liabilities, and feasibility. The table is not meant to be exhaustive in terms of available or acceptable emissions reduction/control technologies or techniques, but provides a baseline or starting point from which to construct design features and mitigation options for project specific or regional analyses.

**Table VI-1 Best Management Practices and Air Emission Reduction Strategies for Oil and Gas Development**

Emission Reduction Measure	Potential Environmental Benefits	Potential Environmental Liabilities	Feasibility
<b>Control Strategies for Drilling and Compression</b>			
Multi-well pad directional or horizontal drilling.	When compared to single pad vertical drilling, reduces construction related emissions, decreases surface disturbance, reduces trip frequencies, and reduces habitat fragmentation.	Could result in higher air impacts in one area with longer sustained drilling times.	Depends on geological strata, topography, and other physical constraints.
Improved engine technology (Tier 2 or 4) for diesel drill rig engines.	Reduced NO <sub>x</sub> , PM, CO, and VOC emissions.		Dependent on availability of technology from engine manufacturers and, potentially differentials in cost for small operators..
Selective Catalytic Reduction (SCR) for drill rig engines and/or compressors.	NO <sub>x</sub> emissions reduction, potential decreased formation of visibility impairing compounds and ozone. NO <sub>x</sub> control efficiency of 95% achieved on drill rig engines. NO <sub>x</sub> emission rate of 0.1 g/hp-hr achieved for compressors.	Potential NH <sub>3</sub> emissions and formation of visibility impairing ammonium nitrate. Regeneration/disposal of catalyst can produce hazardous waste.	Not applicable to 2-stroke engines.
Non-selective catalytic reduction (NSCR) for drill rig engines and/or compressors.	NO <sub>x</sub> emissions reduction, potential decreased formation of visibility impairing compounds, and	Regeneration/disposal of catalysts can produce hazardous waste.	Not applicable to lean burn or 2-stroke engines.

Emission Reduction Measure	Potential Environmental Benefits	Potential Environmental Liabilities	Feasibility
	ozone. NOx control efficiency of 80-90% achieved for drill rig engines. NOx emission rate of 0.7 g/hp-hr achieved for compressor engines greater than 100 hp.		
Natural Gas fired drill rig engines.	NOx emissions reduction, potential decreased formation of visibility impairing compounds, and ozone.	May require construction of infrastructure (pipelines and/or gas treatment equipment). May require onsite gas storage. May require additional engines to supplement needed torque.	Requires onsite processing of field gas.
Electrification of drill rig engines and/or compressors	Decreased emissions at the source. Transfers emissions to more efficiently controlled source (EGU).	Displaces emissions to EGU. Temporary increase in emissions with construction of power lines.	Depends on availability of power and transmission lines.
Improved engine technology (Tier 2, 3 or 4) for all mobile and non-road diesel engines.	Reduced NOx, PM, CO, and VOC emissions.		Dependent on availability of technology from engine manufacturers.
Reduced emission (a.k.a. "green") completions.	Reduction in VOC and CH4 emissions. Reduces or eliminate flaring and venting and associated emissions. Reduces or eliminates open pits and associated evaporative emissions. Increased recovery of gas to pipeline rather than atmosphere.	Temporary increase in truck traffic and associated emissions due to delivery of onsite equipment or due to construction of infrastructure.	Need adequate pressure and flow. Need onsite infrastructure (tanks/dehydrator). Availability of sales line. Green completion required where feasible per COGCC Rule 805(b)(3) and NSPS 40 CFR 63 OOOO.
Flaring of completion emissions	Reduces methane, VOC, and some HAP emissions. Converts CH4 to CO2.		
Minimize/eliminate venting and/or use closed loop process where possible during "blow downs".	Reduces methane, VOC, and some HAP emissions		

<b>Emission Reduction Measure</b>	<b>Potential Environmental Benefits</b>	<b>Potential Environmental Liabilities</b>	<b>Feasibility</b>
Eliminate evaporation pits for drilling fluids.	Reduces VOC and GHG emissions. Reduces potential for soil and water contamination. Reduces odors.	May increase truck traffic and associated emissions. May increase pad size.	Requires tank and/or pipeline infrastructure.
Electrification of wellhead compression/pumping.	Reduces local emissions of fossil fuel combustion and transfers to more easily controlled source.	Displaces emissions to EGU.	Depends on availability of power and transmission lines.
Wind (or other renewable) generated power for compressors.	Low or no emissions.	May require construction of infrastructure. Visual impacts. Potential wildlife impacts.	Depends on availability of power and transmission lines.
Compressor seals – replace wet with dry or use mechanical seal.	Reduce gas venting (VOC and GHG emissions).		May be costly or not mechanically feasible.
Compressor rod packing system – use monitoring and replacement system.	Reduce gas leaks (VOC and GHG emissions).		Requires establishing a monitoring system and doing replacements.
<b>Control Strategies Utilizing Centralized Systems</b>			
Centralization (or consolidation) of gas processing facilities (e.g., separation, dehydration, sweetening).	Reduces vehicle miles traveled (truck traffic) and associated emissions. Reduced VOC and GHG emissions from individual dehydration/separator units.	Temporary increase in construction associated emissions. Higher potential for pipe leaks/groundwater impacts.	Requires pipeline infrastructure, infeasible for highly dispersed or exploratory wells.
Liquids Gathering systems (for condensate and produced water).	Reduces vehicle miles traveled and associated emissions. Reduced VOC and GHG emissions from tanks, truck loading/unloading, and multiple production facilities.	Temporary increase in construction associated emissions. Higher potential for pipe leaks/groundwater impacts.	Requires pipeline infrastructure. May be infeasible for highly dispersed or exploratory wells, difficult terrain, or patchy surface ownership.
Water and/or fracturing liquids delivery system.	Reduced long term truck traffic and associated emissions.	Temporary increase in construction associated emissions. Higher potential for pipe leaks/groundwater impacts.	Requires pipeline infrastructure. May be infeasible for highly dispersed or exploratory wells, difficult terrain, or patchy surface ownership.

<b>Emission Reduction Measure</b>	<b>Potential Environmental Benefits</b>	<b>Potential Environmental Liabilities</b>	<b>Feasibility</b>
<b>Control Strategies for Tanks, Separators, and Dehydrators</b>			
Eliminate use of open top tanks.	Reduced VOC and GHG emissions.		
Capture and control of flashing emissions from all storage tanks and separation vessels with vapor recovery and/or thermal combustion units.	Reduces VOC and GHG emissions.	Pressure buildup on older tanks can lead to uncontrolled rupture.	
Capture and control of produced water, crude oil, and condensate tank emissions.	Reduces VOC and GHG emissions.		95% VOC control required by COGCC in some areas and by CDPHE statewide with applicability thresholds
Capture and control of dehydration equipment emissions with condensers, vapor recovery, and/or thermal combustion.	Reduces VOC, HAP, and GHG emissions.		90% VOC control required by COGCC in some areas and by CDPHE statewide with applicability thresholds
Use zero emissions dehydrators or use desiccants dehydrators.	Reduces VOC, HAP, and GHG emissions.	Requires desiccants (salt tablets and forms a brine solution that must be disposed of.	Can be as effective as Triethylene glycol (TEG) dehydration.
<b>Control Strategies for Misc. Fugitive VOC Emissions</b>			
Install plunger lift systems to reduce well blow downs.	Reduces VOC and GHG emissions.		Can be more efficient at fluids removal than other methods; must have adequate pressure.
Install and maintain low VOC emitting seals, valves, hatches on production equipment.	Reduces VOC and GHG emissions.		
Initiate equipment leak detection and repair program (e.g., including use of FLIR infrared cameras, grab samples, organic vapor detection devices, and/or visual inspection).	Reduction in VOC and GHG emissions.		

<b>Emission Reduction Measure</b>	<b>Potential Environmental Benefits</b>	<b>Potential Environmental Liabilities</b>	<b>Feasibility</b>
Install or convert gas operated pneumatic devices to electric, solar, or instrument (or compressed) air driven devices/controllers.	Reduces VOC and GHG emissions.	Electric or compressed air driven operations can displace or increase combustion emissions.	
Use "low" or "no bleed" gas operated pneumatic devices/controllers.	Reduces VOC and GHG emissions.		Required by COGCC and by CDPHE in non-attainment areas.
Use closed loop system or thermal combustion for gas operated pneumatic pump emissions.	Reduces VOC and GHG emissions.		
Install or convert gas operated pneumatic pumps to electric, solar, or instrument (or compressed) air driven pumps.	Reduces VOC and GHG emissions.	Electric or compressed air driven operations can displace or increase combustion emissions.	
Install vapor recovery on truck loading/unloading operations at tanks.	Reduces emissions of VOC and GHG emissions.	Pressure build up on older tanks can lead to uncontrolled rupture.	
<b>Control Strategies for Fugitive Dust and Vehicle Emissions</b>			
Unpaved surface treatments including watering, chemical suppressants, and gravel.	20% - 80% control of fugitive dust (particulates) from vehicle traffic.	Potential impacts to water and vegetation from runoff of suppressants.	
Use remote telemetry and automation of wellhead equipment.	Reduces vehicle traffic and associated emissions.		Not possible in some terrain.
Speed limit restrictions on unpaved roads.	Reduction of fugitive dust emissions.		
Reduce commuter vehicle trips through car pools, commuter vans or buses, innovative work schedules, or work camps.	Reduced combustion emissions, reduced fugitive dust emissions, reduced ozone formation, reduced impacts to visibility.		
<b>Miscellaneous Control Strategies</b>			
Use of ultra-low sulfur diesel (e.g., in engines, compressors, construction equipment).	Reduces emissions of particulates and sulfates.		Fuel not readily available in some areas.



Emission Reduction Measure	Potential Environmental Benefits	Potential Environmental Liabilities	Feasibility
Reduce unnecessary vehicle idling.	Reduced combustion emissions, reduced ozone formation, reduced impacts to visibility, reduced fuel consumption.		
Reduced pace of (phased) development.	Peak emissions of all pollutants reduced.	Emissions generated at a lower rate but for a longer period. LOP, duration of impacts is longer.	May not be economically viable or feasible if multiple mineral interests.

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# Appendix I

## Drought Management



# APPENDIX I

## DROUGHT MANAGEMENT

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During periods of drought, the following plan would be implemented to reduce impacts of drought on environmental resources.

1. Use **Table I-I**, Drought Severity Classification, as gross thresholds and triggers.
2. Monitor local conditions using the Climate summary – focusing on temperature.
3. Focus on droughty soils.
4. Collect soil moisture data – as needed to determine appropriate management actions.

Implement the following measures/parameters for restricting activities during drought (refer to **Table I-I**):

### **Severe (D2):**

- Send drought letters to grazing permittees and other permitted land users.
- Prepare local seasonal precipitation graphs.
- Suspend or limit seed-collecting activities.

### **Extreme (D3):**

- Prohibit new surface-disturbing activities in areas with sensitive soils, subject to valid existing rights or actions associated with other valid permitted activities.
- Base changes in livestock use on site-specific data on those allotments that are affected by drought.
- Temporarily close OHV Open Areas and designated routes as needed during periods of drought and wind events to reduce particulate matter.
- Require additional erosion-control techniques/BMPs for surface-disturbing activities (e.g., hydromulching).



- Limit prescribed burns and vegetation treatments (exceptions: pile burning and hand thinning).
- Monitor instream flow water rights for CWCB for out of priority water use or potential injury - “formal call” of water

***Exceptional (D4):***

- Base changes in livestock use on site-specific data on those allotments that are affected by drought.
- Prohibit new surface-disturbing activities, subject to valid existing rights or actions associated with other valid permitted activities.
- Consider closing areas to public entry.
- Monitor instream flow water rights

**Table I-1  
Drought Severity Classification**

Category <sup>1</sup>	Description	Possible Impacts	Ranges				
			Palmer Drought Index (mimics soil moisture)	Climate Prediction Center Soil Moisture Model (Percentiles)	USGS Weekly Streamflow (Percentiles)	Standardized Precipitation Index	Objective Short and Long-term Drought Indicator Blends (Percentiles) <sup>2</sup>
D0	Abnormally Dry	Going into drought: short-term dryness slowing planting, growth of crops or pastures. Coming out of drought: some lingering water deficits; pastures or crops not fully recovered	-1.0 to -1.9	21-30	21-30	-0.5 to -0.7	21-30
D1	Moderate Drought	Some damage to crops, pastures; streams, reservoirs, or wells low, some water shortages developing or imminent; voluntary water-use restrictions requested	-2.0 to -2.9	11-20	11-20	-0.8 to -1.2	11-20
D2	Severe Drought	Crop or pasture losses likely; water shortages common; water restrictions imposed	-3.0 to -3.9	6-10	6-10	-1.3 to -1.5	6-10
D3	Extreme Drought	Major crop/pasture losses; widespread water shortages or restrictions	-4.0 to -4.9	3-5	3-5	-1.6 to -1.9	3-5

**Table I-1  
Drought Severity Classification**

Category <sup>1</sup>	Description	Possible Impacts	Ranges				
			Palmer Drought Index (mimics soil moisture)	Climate Prediction Center Soil Moisture Model (Percentiles)	USGS Weekly Streamflow (Percentiles)	Standardized Precipitation Index	Objective Short and Long-term Drought Indicator Blends (Percentiles) <sup>2</sup>
D4	Exceptional Drought	Exceptional and widespread crop/pasture losses; shortages of water in reservoirs, streams, and wells creating water emergencies	-5.0 or less	0-2	0-2	-2.0 or less	0-2

Source: University of Nebraska Lincoln, National Drought Mitigation Center 2008. A partnership consisting of the US Department of Agriculture (Joint Agricultural Weather Facility and National Water and Climate Center), the National Weather Service's Climate Prediction Center, National Climatic Data Center, and the National Drought Mitigation Center at the University of Nebraska Lincoln produces the Drought Monitor. However, advice from many other sources is incorporated in the product, including virtually every government agency dealing with drought.

<sup>1</sup>Drought intensity categories are based on five key indicators and numerous supplementary indicators. This drought severity classification table shows the ranges for each indicator for each dryness level. Because the ranges of the various indicators often do not coincide, the final drought category tends to be based on what the majority of the indicators show. The analysts producing the map also weight the indices according to how well they perform in various parts of the country and at different times of the year. Also, additional indicators are often needed in the West, where winter snowfall has a strong bearing on water supplies.

D0-D4: The drought monitor summary map identifies general drought areas, labeling droughts by intensity, with D1 being the least intense and D4 being the most intense. D0, drought watch areas, are either drying out and possibly heading for drought, or are recovering from drought but not yet back to normal, suffering long-term impacts such as low reservoir levels.

<sup>2</sup>Short-term drought indicator blends focus on 1- to 3-month precipitation. Long-term blends focus on 6 to 60 months. Additional indices used, mainly during the growing season, include the US Department of Agriculture/National Agricultural Statistics Service Topsoil Moisture, Keetch-Byram Drought Index, and National Oceanic and Atmospheric Administration/National Environmental Satellite, Data, and Information Service satellite Vegetation Health Indices. Indices used primarily during the snow season and in the West include snow water content, river basin precipitation, and the Surface Water Supply Index. Other indicators include groundwater levels, reservoir storage, and pasture/range conditions.

**References**

University of Nebraska Lincoln, National Drought Mitigation Center. 2008. Drought Monitor. Updated January 2, 2008. Internet Web site: <http://www.drought.unl.edu/dm/classify.htm>. Accessed on February 2, 2010.

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